Flower Library

Ta2
IX
22

ANNEX
LIBRARY
C
002264

CORNELL UNIVERSITY
THE
Roswell P. Flower Library
THIS BOOK IS THE GIFT OF
M. A. Dumond, M.D.
Ithaca,
N. Y.
July 1914

CORNELL UNIVERSITY LIBRARY
3 1924 056 973 005

W. A. Dumond M.D.
West Danby
N.Y.

THE MEDICAL RECORD.

A Weekly Journal of Medicine and Surgery.

EDITED BY

GEORGE F. SHRADY, A.M., M.D.,

SURGEON TO THE PRESBYTERIAN AND ST. FRANCIS HOSPITALS, NEW YORK, AND CONSULTING SURGEON TO THE HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK.

Volume 22.

JULY 2, 1882—DECEMBER 30, 1882.

NEW YORK:
WILLIAM WOOD & COMPANY.
1882.

No. 4476

Ta2
IX
22

TROW'S
PRINTING AND BOOKBINDING COMPANY,
201–213 *East 12th St.*,
NEW YORK.

LIST OF CONTRIBUTORS TO VOL. XXII.

ABBOTT, Dr. A. W., Minneapolis, Minn.
AGNEW, Dr. C. R., New York.
ALLISON, Dr. H. C., Willard, N. Y.
ANDREWS, Dr. JOSEPH A., Hong Kong, China.
ARMSTRONG, Dr. JOHN A., Brooklyn, N. Y.

BALLERY, Dr. G. H., Newark, N. J.
BANKS, Dr. E. A., New York.
BARKER, Dr. P. C., Morristown, N. J.
BEACH, Dr. WILLARD P., Randall's Island, N. Y.
BEARD, Dr. GEORGE M., New York.
BEAUMETZ, Dr. DUJARDIN, Paris, France.
BENEDICT, Dr. A. C., Yonkers, N. Y.
BENNETT, Dr. W. H., Brooklyn, N. Y.
BERRY, Dr. J. J., South Norwalk, Conn.
BILL, Dr. J. H., Surgeon U.S.A.
BLISS, Dr. D. W., Washington, D. C.
BODENHAMER, Dr. WILLIAM, New York.
BORCHEIM, Dr. G. E., Clifton, Arizona.
BOSWORTH, Dr. F. H., New York.
BRANDT, Dr. WM. E., Hanover, Ind.
BRIDDON, Dr. CHAS. K., New York.
BROWN, Dr. BEDFORD, Alexandria, Va.
BRUSH, Dr. E. F., Mount Vernon, N. Y.
BUCK, Dr. ALBERT H., New York.
BULL, Dr. WILLIAM T., New York.
BURDETT, Mr. H. C., New York.
BURNETT, Dr. J., Carbondale, Pa.
BURRALL, Dr. F. A., New York.
BYRD, Dr. HARVEY L., Baltimore, Md.
BYRD, Dr. WM. A., Quincy, Ill.
BYRNE, Dr. W. J., Russelville, Ky.

CALHOUN, Dr. CHARLES WM., Tripoli, Syria.
CAMMANN, Dr. D. M., New York.
CARPENTER, Dr. WESLEY M., New York.
CHANDLER, Dr. W. J., South Orange, N. J.
CHEESMAN, Dr. W. S., Auburn, N. Y.
COOVER, Dr. FRED. W., Harrisburg, Pa.
CORNING, Dr. J. LEONARD, New York.
CORNWELL, Dr. HENRY G., Columbus, O.
CRONIN, Dr. P. H., St. Louis, Mo.
CROTHERS, Dr. T. D., Hartford, Conn.
CURTIS, Dr. H. HOLBROOD, New York.
CUTTER, Dr. GEO. R., New York.

DANA, Dr. CHAS. L., New York.
DERBY, Dr. N. R., Bergen Point, N. J.

EAGAN, Dr. PETER R., Fort Bowie, Arizona.
EDSON, Dr. BENJAMIN, Brooklyn, N. Y.
ENGEL, Dr. HUGO, Philadelphia, Pa.

FIELD, Dr. E., Red Bank, N. J.
FULLER, Dr. WILLIAM, Grand Rapids, Mich.

GILL, Dr. H. Z., Chester, Ill.
GREEN, Dr. TRAILL, ———
GREGG, Dr. ROLLIN G., Buffalo, N. Y.

HAMILTON, Dr. ALLAN MCLANE, New York.
HAMMOND, Dr. GRÆME M., New York.
HANKS, Dr. H. T., New York.
HARNDEN, Dr. R. S., Waverly, N. Y.
HAYES, Dr. JUSTIN, Chicago, Ill.
HAYWOOD, Dr. R. B., Raleigh, N. C.
HEBBARD, Dr. W. W., Boston, Mass.
HEMENWAY, Dr. H. B., Kalamazoo, Mich.
HENRY, Dr. M. H., New York.
HERMANN, Dr. E. M., Yonkers, N. Y.
HINSDALE, Dr. GUY, Philadelphia, Pa.
HOUSTON, Dr. THOMAS, Clarkesville, Ga.
HOWELL, Dr. S. Y., Berlin, Germany.
HUMPHREY, Dr. LAWRENCE, London, England.
HUNTER, Dr. ALEXANDER S., New York.
HUNTER, Dr. JAMES B., New York.
HURD, Dr. E. P., Newburyport, Mass.
HUTCHINS, Dr. O. J., Depeyster, N. Y.
HUTCHINSON, Dr. WM. F., Providence, R. I.

ILLOWAY, Dr. H., Cincinnati, O.

JACOBI, Dr. A., New York.
JACOBSON, Dr. NATHAN, Syracuse, N. Y.
JONES, Dr. HERBERT C., Cerro Gordo, Ill.
JUDSON, Dr. A. B., New York.

KELSEY, Dr. CHAS. B., New York.
KINLOCH, Dr. R. A., Charleston, S. C.
KINNICUTT, Dr. FRANCIS P., New York.
KOHN, Dr. SAMUEL, New York.

LEFFERTS, Dr. GEO. M., New York.
LLOYD, Dr. T. M., Morris Plains, N. J.
LORING, Dr. E. G., New York.
LYDSTON, Dr. G. FRANK, Chicago, Ill.
LYMAN, Dr. HENRY M., Chicago, Ill.
LYON, Dr. A. A., Shreveport, La.

MCBRIDE, Dr. T. A., New York.
MCCOY, Dr. J. CRESAP, Kirwood, Del.
MCINTYRE, Dr. CHARLES, Easton, Pa.
MCMAHON, Dr. WM. J., New York.
MACKENZIE, Dr. MORELL, London, England.
MATTISON, Dr. J. B., Brooklyn, N. Y.
MORRIS, Dr. ROBERT T., New York.
MORTON, Dr. WM. J., New York.

NEAL, Dr. JAMES C., Archer, Fla.
NEILSON, Dr. T. B., Philadelphia, Pa.

NEWMAN, Dr. ROBERT, New York.
NEWTON, Dr. R. C., Fort Cummings, New Mexico.
NORTH, DR. N. L., Brooklyn, N. Y.

O'DEA, Dr. J. J., Stapleton, N. Y.
OTIS, Dr. F. N., New York.

PAGE, Dr. R. C. M., New York.
PARKER, Dr. W. THORNTON, Jamaica Plain, Mass.
PARTRIDGE, Dr. EDWARD L., New York.
PETERS, Dr. GEORGE A., New York.
PETERS, Dr. JOHN C., New York.
PHINNEY, Dr. A. H., Howell, Mich.
POORE, Dr. C. T., New York.
POST, Dr. A. C., New York.
POST, Dr. SARAH E., New York.
POWELL, Dr. JUNIUS L., Asst. Surg. U.S.A.

RANSHOFF, Dr. JOSEPH, Cincinnati, O.
RAYMOND, Dr. H. I., U. S. Army.
RICE, CHARLES, Ph.D., New York.
RICHARDSON, Dr. JOHN B., Louisville, Ky.
RIDLON, Dr. JOHN F., New York.
ROBINSON, Dr. BEVERLEY, New York.
ROE, Dr. J. O., Rochester, N. Y.
ROOSA, Dr. D. B. ST. JOHN, New York.
ROSEBRUGH, Dr. A. M., Toronto, Canada.

SALMON, Dr. D. E., Asheville, N. C.
SATTERTHWAITE, Dr. T. E., New York.
SCHWATKA, Dr. FREDERICK, U. S. Army.
SCHWEIG, Dr. GEO. M., New York.
SEARCY, Dr. J. T., Tuscaloosa, Ala.
SEILER, Dr. GEO., Alma, Wis.
SEYMOUR, Dr. W. W., Troy, N. Y.
SEXTON, Dr. SAMUEL, New York.
SHOEMAKER, Dr. M., Tipton, Iowa.
SHORTER, Dr. J. H., New York.
SHRADY, Dr. GEO. F., New York.
SMITH, Dr. ANSON P., Sandy Hook, Conn.
SMITH, Dr. J. LEWIS, New York.
STAIR, Dr. J. B., Spring Green, Wis.
STEIN, Dr. ALEX. W., New York.
STERNBERG, Dr. GEO. M., Surgeon U.S.A.

TAYLOR, Dr. HENRY LING, New York.
THOMAS, Dr. J. G., Savannah, Ga.
TURNIPSEED, Dr. E. B., Columbia, S. C.
TYLER, Dr. LACHLAN, Washington, D. C.
TYSON, Dr. JAMES, Philadelphia, Pa.

VALK, Dr. FRANCIS, New York.
VEEDER, Dr. M. A., Lyons, N. Y.
VON RAMDOHR, Dr. C. A., New York.

WADSWORTH, Dr. J. W., Saltillo, Mexico.
WALES, Dr. P. S., Surgeon-General U.S.N.
WALLACE, Dr. DAVID L., Newark, N. J.
WARD, Dr. GEO. A., Cerro de Pasco, Peru.
WARE, Dr. CHAS., New York.
WATERMAN, Dr. S., New York.
WATSON, Dr. W. P., Jersey City, N. J.
WEBER, Dr. LEONARD, New York.
WEBSTER, Dr. DAVID, New York.
WEIR, Dr. R. F., New York.
WELSH, Dr. GEO. T., Keyport, N.J.
WENDT, Dr. E. C., New York.
WESTERBROOK, Dr. B. F., Brooklyn, N. Y.
WHITMAN, Dr. ROYAL, Boston, Mass.
WILDER, Dr. A. M. San Francisco, Cal.
WILSON, Dr. HOLT C., Portland, Oregon.

YALE, Dr. L. M., New York.

Institutions and Societies from which Reports have been received.

AMERICAN ACADEMY OF MEDICINE.
AMERICAN GYNECOLOGICAL SOCIETY.
AMERICAN NEUROLOGICAL ASSOCIATION.
BOSTON CITY HOSPITAL.
BRITISH LYING-IN HOSPITAL, LONDON.
BRITISH MEDICAL ASSOCIATION.
CITY OF LONDON HOSPITAL.
EPISCOPAL HOSPITAL, PHILADELPHIA, PA.
FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.
GERMAN SURGICAL SOCIETY.
HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, LONDON, ENGLAND.
HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.
LONDON HOSPITAL, LONDON, ENGLAND.
MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.
NEW HAMPSHIRE MEDICAL SOCIETY.
NEW YORK ACADEMY OF MEDICINE.
NEW YORK HOSPITAL.
NEW YORK NEUROLOGICAL SOCIETY.
NEW YORK PATHOLOGICAL SOCIETY.
NEW YORK SOCIETY OF GERMAN PHYSICIANS.
NEW YORK SURGICAL SOCIETY.
NORTHEASTERN HOSPITAL FOR CHILDREN, LONDON,
PRACTITIONERS' SOCIETY OF NEW YORK.
RANDALL'S ISLAND HOSPITAL.
ROOSEVELT HOSPITAL.
ST. MARY'S HOSPITAL, LONDON.

THE MEDICAL RECORD.

VOL. XXII. JULY 1, 1882. No. 1.

Original Communications.

OPERATIONS FOR RESTORING COMPLETE LACERATIONS OF THE FEMALE PERINEUM THROUGH THE SPHINCTER ANI,

AND THE SUBSEQUENT MANAGEMENT WITHOUT CONSTIPATING THE BOWELS.[1]

BY H. T. HANKS, M.D.,

ASSISTANT SURGEON TO THE WOMAN'S HOSPITAL.

THE necessity of an operation for restoring the female perineum after a complete laceration extending through the sphincter ani, cannot be questioned for one moment by any intelligent physician. The annoyances, mortification, and distress which a woman of fine sensibility endures, when suffering from this accident, are so manifest that the surgeon does not need to ask if the operation is demanded, but rather, can it be successfully performed? Few lesions can exist which will occasion so much mental anxiety and result in so much physical suffering to a lady, as a complete rupture of the perineum through the sphincter ani. The constant fear lest rectal gas and fecal matter may escape, causes her to avoid society, and often to shun her own husband. This mental strain, though exquisitely distressing, is not all, since the support which the perineum and sphincter give in health, being now lost, the liability of a cystocele, prolapsus of the uterus and eversion of the rectum, is very great. And generally one or all of these distressing pathological changes will result from, and be present with, a laceration through the sphincter.

In several of my cases I have found the uterus prolapsed to the ostium vaginæ, while two have been great sufferers from eversion and prolapsus of the bowels. In one recent case, under the care of Dr. Thomas at the Woman's Hospital, this condition of rectal eversion and prolapsus was of so long standing, that it was difficult to determine the exact pathological condition, and the operation for cure was extremely complicated and tedious.

The operation for restoring the perineum and sphincter when completely torn through is difficult. And the subsequent management of the bowels by confining them for eight to ten days, and carefully superintending personally, or by the aid of the nurse, every step in their final evacuation after this period, is so trying that the operation is more often than otherwise a failure, when performed by the general practitioner. Hoping to make some points in the operation more simple, and the after-treatment less te lious to the surgeon and distressing to the patient, I have been led to prepare this paper.

My opportunities to watch the operations and results, at the Woman's Hospital, and of several of my professional friends, where I have been the consulting physician, and those cases coming immediately under my own care in private, and public practice, have given me an excellent field for the study and trial of the best methods of operating, and the subsequent management of the patient. I am convinced that there is a necessity for a better understanding of the different methods of operating, the advantages of each method, the causes and possible chances of failure, and the best course to pursue to insure a successful result in each case. All who have operated several times have had failures; and the most experienced gynecologists have occasionally had only failures, after two or more operations upon the same patient. During the last six months my attention has been particularly called to the uncertainty of a successful result in the ordinary operation and subsequent treatment, even when every condition would seem to be favorable. I have, therefore, taken occasion to look up the notes of my own cases, and to procure statistics from the Woman's Hospital, through the kindness of Drs. W. E. Mosely and H. C. Coe, internes of that institution. In studying these facts I have been surprised at the percentage of failures after the first operation, and can, therefore, see how Barnes can say: "If the rupture extends through the sphincter the difficulty is often serious, and success has sometimes to be pursued in two or more trials."

Schroeder says: "This complicated and difficult operation is not apt to be very successful." One of the most industrious, painstaking, and distinguished gynecologists in America stated in my presence that, without the best attention and personal vigilance of a trained nurse, failure was the rule. Another equally eminent authority confirmed this statement.

The Emmet operation in lacerations extending through the *sphincter ani* only, brings the parts in exact apposition, and when successful, the final result is as perfect a union as could be desired. When, however, the laceration extends through the sphincter and half an inch or more above, in the rectal wall, the so-called Simon operation is more surely indicated for closing the rectum and sphincter, and will give better results. A second operation (Emmet's) may be subsequently required to close the perineum, however.

I shall describe these operations and endeavor to make each step clear and plain.

I shall recommend a new method of securing the ends of the wires, which perhaps is a small matter.

Finally, I shall urge the advantages and importance of keeping the patient's bowels relaxed for two weeks after the operation, which, in my opinion, is the most important factor for success, after a perfect operation has been performed. I am convinced that the usual method of confining the bowels for eight to ten days after the operation was the cause, either directly or indirectly, of more than half my own and my friends' failures.

The operation of closing the perineum and sphincter ani and rectal wall, is really more trying, and one that requires more judgment and skill, and a more thorough knowledge of the anatomy of the parts, than many which seem far more heroic and important.

In order to make the difficult steps of the opera-

[1] Read before the Obstetrical Section of the New York Academy of Medicine, May 25, 1882.

tion which I recommend perfectly plain and more easily understood than is possible from the descriptions in our text-books, I have prepared a number of models[1] and plates,[2] which, though rough exaggerations, will aid me, I trust, in accomplishing this end.

Before performing the Emmet operation, which is recommended for all cases in which the perineum and sphincter ani *only* are involved, there should be careful preparation for one week; and the operation should be avoided here, in New York, during the rough weather of March, or the heat of July and August, and should never be undertaken when the operator is also attendant upon a case of erysipelas, scarlet fever, or diphtheria.

In preparing the patient, she should be brought into the best possible physical condition by a course of tonics, good food, and regular exercise, if possible, preparing her mind as well as body for the operation, by encouraging prospects of a complete recovery.

The operation should be performed from five to seven days after menstruation, and a thorough evacuation of the bowels should be procured daily, for a full week before; at first, for two days, by means of two or more comp. cath. pills, afterward by a daily dose of the comp. liquorice powder; cream tartar, sulphur, and rhubarb; hunyadi water; or a seidlitz powder. Whichever is used, it should be sufficient to move the bowel thoroughly. After thus testing the quantity required, for three or four days, the exact amount requisite to liquefy the evacuations, subsequent to the operation, may be ascertained. By this means the danger of hypercatharsis, as occurred in one of my cases, can be avoided. Three assistants are required; one to administer the ether, and one to steady each leg and separate the thighs. The patient, having been thoroughly prepared as has been described, should be anæsthetized and placed in the lithotomy position before a good light. All hairs in the immediate vicinity of the parts should be removed; after which a thorough examination of the rectum and vagina should be made, as only after this careful inspection will the torn edges of the bowel and sphincter ani be seen, and felt, and the original perineal cicatrix be recognized.

The tenaculum should then be made to seize a portion of the tissue above A, in Fig. 1, upon the patient's left. The tissue, one-eighth of an inch in breadth, thus raised by the tenaculum, should then be dissected off with a pair of curved scissors down to the angle O, cutting sufficiently deep to expose the fibres of the torn sphincter.

A similar dissection should be made from O to A, on the patient's right. This will thus leave denuded the edges of the torn sphincter and rectum. Then a point of tissue should be seized just above A, near B, on the patient's left, and a similar strip should be dissected off with the scissors, until the point B is reached on the right. Similar steps should be taken until the whole perineum is denuded, as represented from AA to GG in Fig. 1, which can always be determined by the cicatrix. After the sphincter and rectum have been prepared, the further denudation for the perineal body may be varied, as may seem most convenient and judicious to the operator, at the time. Great care should be exercised, however, in coming down upon the floor of the vagina upon both sides, to remove all the mucous membrane of the two triangles which are to constitute the denuded space, and united, to form the perineal body.

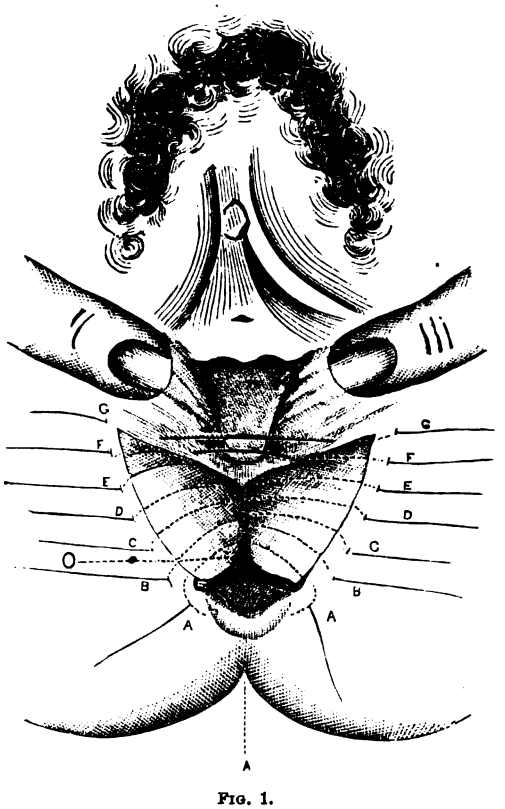


FIG. 1.

In immediate operations, and more *recent* lacerations, after denuding, considerable hemorrhage may be encountered, which can easily be checked by a few moments' pressure with the hæmostatic forceps, or napkin wet in hot water, as a compress. It is very rarely that a bleeding vessel requires to be tied. The parts should be thoroughly sponged with carbolized warm water, the denuded triangles brought together, and carefully compared. If not exactly similar they should be made so before the sutures are introduced. In introducing the wires the experienced operator will use a straight or curved round pointed needle, about two and one-fourth inches in length, held by a needle-holder. The general practitioner, who may perform the operation only at rare intervals, may use a long curved Peaslee needle, which is firmly attached to a handle, and has the eye at the point. Each needle has its advantage. The straight needle is always used by Drs. Emmet and Thomas, and in their hands is exceedingly convenient; but they also use a needle-holder which does not stay closed excepting when held closed by the hand. The curved needle can be used with greater ease by one not accustomed to frequent operations, if only a needle-holder is used which firmly holds the needle, and remains locked until it is desired to draw the needle through on the opposite side.

[1] These models are oval rings of curled hair, covered with chamois skin. The size most convenient is about ten by seven inches. Where the model is to show the denuded surfaces, there should be a second or inner covering for the curled hair. Then the denudation will consist in dissecting away the outer covering. The recto vaginal septum is made by sewing, and thus drawing together the chamois skin covering of the inner side of the ring.

[2] My friend, Dr. J. H. Gunning, has rendered me valuable assistance in preparing the drawings from which these plates were taken.

The Peaslee needle with handle, and the eye at the point, if it could be made as fine as the other kinds, would be exceedingly convenient. But its objection in this operation is its size, and the consequent danger of injuring veins and arteries, and of breaking through the thin rectal wall at the angle O.

Twenty inches of strong, but fine, silk or linen thread should be doubled, and about four inches of the two ends passed, in opposite directions, through the eye of this straight, or curved needle, thus leaving a loop of about six inches from the eye of the needle. Through this loop the end of a No. 26, or 27, silver wire, ten inches in length, may be hooked, and bent sharply upon itself. The needle, thread and wire should be anointed with vaseline.

The left index-finger of the operator should be inserted in the rectum. The point of the threaded needle, firmly held by the needle-holder, should be inserted into the tissue to the left side of the rectum, at A, in Fig. 1. This point should be but a little above the level of the floor of the rectum, in the undenuded tissue, one-third of an inch from the beginning of the point of denudation. The needle is then slowly and carefully insinuated through the tissue back of the torn sphincter, through the edge of the torn rectum, above the angle O. After passing above the angle O in the rectal wall, by pushing the eye of the needle upward, and pressing it against the glutei muscles, and pulling the point downward, with the index-finger in the rectum and the thumb in the vagina, the point may be made to emerge at A, upon the right. This is easy in recent cases, but more difficult in old cases, where atrophy has taken place. In such cases the needle should emerge from the recto-vaginal septum, just above the angle O; then seize it with the needle-holder and draw it through; afterward insert it at the very point of exit and pass it downward to A, on the right, where it should emerge at a point which exactly corresponds to the point of its original insertion on the left. Upon drawing the needle out with the needle-holder, the thread follows, drawing the silver wire with it, and thus the first and most important suture is introduced.

Great care is necessary that the points of entrance and exit are parallel and correspond. The suture BB passes in just above AA, and through the recto-vaginal septum $\frac{1}{16}$ to $\frac{1}{8}$ of an inch above the suture AA at the angle O. Equal care should be exercised to prevent the needle from passing into the rectum as it passes the angle O; also, that it is not exposed at this, or any point, from its points of entrance to the corresponding point of exit. The sutures FF and GG are so inserted as to bring together the upper angles of the triangle. They are therefore seen in the vagina after having been passed through the upper denuded angles.

In Fig. 2 the suture GG is represented as passing down and under the central portion of the lower border of the undenuded portion of the vagina. In Fig. 1, when the parts are brought together by the closing of all the sutures, GG and FF do not draw up the floor of the vagina. In Fig. 2, after the sutures AA, BB, and GG are twisted, the floor of the vagina will be drawn upward by the suture GG, thus covering with healthy mucous membrane a part of the upper and inner portion of the restored perineum.

The two methods should be varied according as there is little, or much, loose vaginal tissue to draw up.

The parts are now ready for the adjusting and twisting of the wires. All of the wires should be fastened at their extremities and drawn upward, excepting AA, and held out of the way by the assistant. The operator should then seize suture AA, separate the extremities, and carefully slide the wire up and down, to see that there is no knot, nor impediment, in the tissue. He should then, with the fingers or the twister, seize the two wires at about two inches from the anus, and twist them carefully. The assistants in the meantime, with two tenaculi, each inserted above the torn extremities of the sphincter, as in Fig. 2, should approximate the edges in exact apposition, while AA is being twisted by the

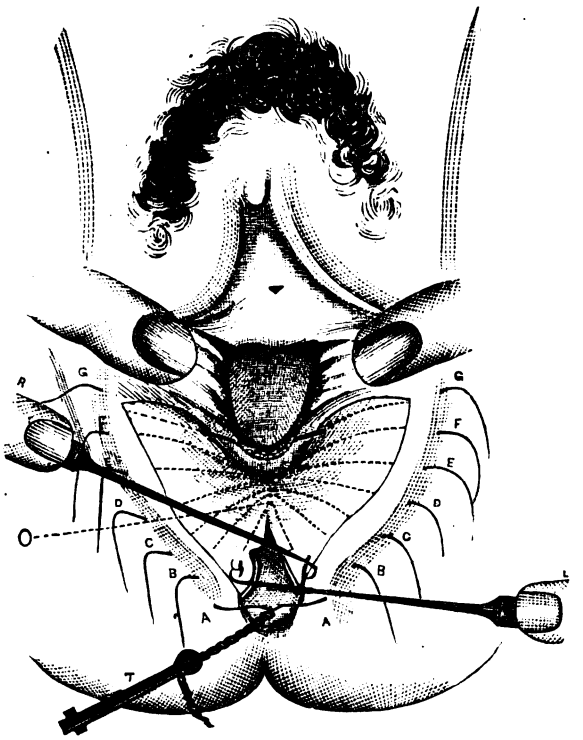


FIG. 2.

operator. Care should here be exercised that what were the outer edges of the sphincter, but are now the upper edges of the approximating sphincter, are made to approach and touch accurately, in order to unite and form a perfect union and a symmetrical circular sphincter.

While being thus held by the tenaculi R L, as in Fig. 2, in exact position by the assistants, the final twisting of the wire AA is completed. It should not be twisted too tightly, or the tissues will be cut through or the parts strangulated. The finger should be introduced in the rectum, that the necessary judgment may be used. At this stage, a careful inspection of the wound in the rectum should be made, both by the finger and the eye. If there is any pouting upward, through the wound, of the mucous membrane of the rectum, it must be crowded back, and the wire twisted somewhat tighter. This most important suture cannot be too accurately adjusted. In twisting the wire BB, the same caution should be exercised by the assistants, under the direction of the operator, in exactly approximating the denuded parts. It will be found to be most convenient in managing the wires CC, etc., to

bring them together by the hand, and twist them once or twice around at their exit, while the final twisting should be completed by the wire-twister. Always use the wire adjuster in the final tightening of all sutures.

To complete the operation in the most convenient and best form, these twisted extremities should be separated into two groups, and smoothed out, and cut off about one and one-quarter inch long, with one wire of each group a little longer than the others. Then a small piece of rubber tubing, one inch in length, should be slipped over the lower group of wires sufficiently far that the extremities may be seen, and these extremities should be fastened to the upper group, and the rubber tubing slipped upward, until it completely covers all the

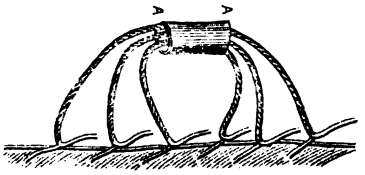


FIG. 4.

sharp ends of the wires, as in Fig. 4; or, what is full better, after separating the wires into two groups, the ends should be joined, and these joined ends covered with tin-foil, or sheet-lead, and the whole flattened, that there may be no sharp points to press into the flesh, when the thighs of the patient are brought together.

The parts should be thoroughly cleansed, a hypodermic injection administered of one-fourth of a grain of morphine, and the patient placed in bed, the knees having been fastened together, not too tightly, by means of a napkin.

These sutures should be cut and removed on the ninth or tenth day.

In cases of laceration of the perineum extending through the sphincter ani, and involving a considerable portion of the rectal tissue above, the Emmet operation is not the best. But the one which has been designated as the *Simon* operation, and represented in Fig 3, if well performed, will give the patient the best chance of a perfect restoration of the parts. The Simon operation is not so frequently performed in America, for perhaps three reasons: First, the Emmet operation has become popularized, especially in New York, from its advocacy by Drs. Emmet and Thomas. Second, the Simon operation requires more time. Third and most important reason is, that the necessity is not so common, as lacerations far up the rectum are less frequent. By examination of Fig. 3 it will be seen that it represents a laceration of an inch and a half above the sphincter ani. If the laceration of the rectum in Fig. 1 extended as far up as in Fig. 3, the wire suture AA would of necessity be much longer, and when the wound would have been closed by tightening wire AA, as in Fig. 2, it would be impossible to suppose that each fibre of the rectum and sphincter had met its severed fellow in exact apposition. But, instead, there would undoubtedly be left an open centre or fistula, or, at least, a semi-closed space, which, like the mouth of a bag closed with a string, would easily admit a probe of moderate size. In other words, the farther up the rectum that the wound extends, the greater the difficulty and the less the possibility, in the Emmet operation, of bringing each circular fibre of the sphincter and rectum in exact apposition with its severed fellow.

For these reasons, and from my own practical experience, which confirms their correctness, I advise and practise the Simon method, in all cases where the laceration extends for more than one-half inch above the sphincter ani.

The Simon operation should be performed as follows: The patient should be thoroughly prepared, and occupy the lithotomy position, as for the Emmet operation.

If the laceration is extensive, two operations are necessary: the rectum and sphincter should be repaired at the first; the perineum restored and closed at another sitting, at least four weeks later.

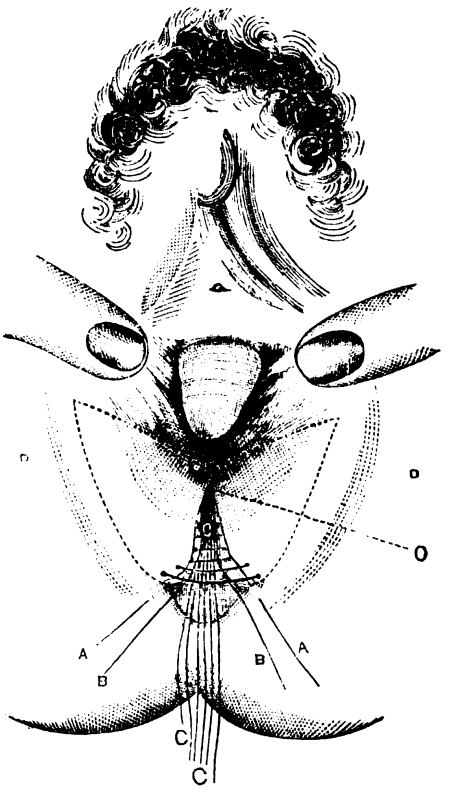


FIG. 3.

Fig. 3 represents the closing of the rectum and sphincter; the dotted line represents the undenuded cicatrix of the lacerated perineum, to be closed later.

The operation consists, first, in carefully denuding the lacerated ends of the sphincter ani and the edges of the torn rectum. Afterward, at the upper angle O, in Fig. 3, upon the right side of the tear in the rectum, a short, fine, curved needle threaded with fine silk should be inserted from below upward, one-eighth of an inch distant from the edge of the laceration, then drawn out through the floor of the vagina, and passed over to the opposite side of the wound, and inserted from above downward, at the same distance from the edge of the laceration as its point of exit upon the opposite side; then carefully draw it through, bringing the edges of the rectum in exact apposition by tightening and tying the sutures from below. One end of the suture may then be cut off, leaving only one

thread lying upon the floor of the rectum. This step has brought the angle O from one-sixteenth to one-eighth of an inch nearer the anus. Similar sutures should be successively passed, at regular intervals of one-eighth of an inch, until the sphincter is reached.

In Fig. 3, the sutures CC are represented as inserted, but not tightened, in order to show their direction, and more distinctly the appearance of the laceration. When the sphincter ani is reached with the sutures CC, each having been tightened in turn, a stronger silk, or a wire suture is needed for the more firm sphincter. In Fig. 3, BB and AA represent the silver-wire sutures which are passed, respectively, through the edge of the sphincter ani, in similar manner to those of the silk, CC, through the rectal tissue above.

As these are tightened, great care should be taken that the assistants, with two tenaculi, as in Fig. 2, bring the edges of the sphincter in exact apposition while the sutures are being twisted by the operator. It will be seen that the Simon operation, as here represented and described, consists solely in bringing each circular fibre of the rectum and sphincter in exact apposition with its fellow, or, as nearly as possible into its original condition before the rupture.

The patient will then be left, if satisfactory union takes place, with only a laceration of the perineum down to the sphincter. The discomforts and mortification, consequent upon the lacerated sphincter, will be entirely removed, and the patient comparatively comfortable, even though the more simple operation of perineorrhaphy should not be subsequently performed.

A hypodermic injection of morphine should be administered, and the same subsequent treatment pursued, as after the Emmet operation. But in this operation the sutures are not to be removed at the expiration of ten days. The two sutures through the sphincter, which are within reach, can be safely removed at about the ninth, or tenth, day. It is advisable to leave the silk sutures, however, for full one month, when the sphincter ani, and the rectal wall, will be strong enough to bear the introduction of the Sims speculum, which it is necessary to use in their removal.

At this time, too, a few, if not all, the fine silk rectal sutures will have sloughed away.

The diet of the patient, after either operation, should be judiciously planned, with a view to proper nourishment and the relaxed condition of the bowels. No medicine will probably be required on the following day. If, however, excessive pain is present, a hypodermic injection of Magendie's solution may be administered. Daily vaginal injections of warm carbolized water should be used—always introducing the nozzle with the greatest care, and holding it steady during the time.

Whatever laxative seems best suited to the patient should be used in sufficient quantity after the second day, to produce liquid evacuations. The same course should be pursued on each succeeding day, until the tenth. If, during this time, there has been excessive heat and pain, the perineum should be frequently douched with carbolized warm water. The urine should be drawn as necessary, for the first two or three days, afterward it may be passed directly into the bed-pan. The patient should *by no means* be allowed to sit upon the chamber, but should keep the recumbent position *invariably* in using the bed-pan for the evacuation of the bowels and bladder.

I have no doubt that others will be equally surprised with myself, at the percentage of failures after performing operations here described I have operated 21 times upon 18 different patients, 3 requiring a second operation. Some of these have been cases of long standing, and where more or less atrophy had taken place about the parts. In several, the rectum was torn for an inch and a half above the sphincter. Only 3 cases were what is called the immediate operation, *i.e.*, directly after the birth of the child. Of these 21 operations there were 13 successful results, and 8 failures, or sixty-two per cent. successful, and thirty-eight per cent. failures. With other later operations there would undoubtedly have been several additional cures, but the disappointment of the patient after a failure is so great, and, when the bowels are finally evacuated, the physical pain is so intense, if they have been constipated, that patients are unwilling to submit to a second operation.

Several of my patients, and those of my professional brethren, have thus been reluctant to receive a second operation, simply from dread of the suffering in the final procedure of opening the bowels, which have been closed for nine days. Let me briefly relate the causes of each of my failures.

Case I.—Mrs. H——, rupture through perineum and sphincter only. Accident with first child. Patient twenty-two years of age, stout, unable or unwilling to bear pain. The Emmet operation, after suitable preparation, was performed two weeks after the accident. Patient undoubtedly took more, and different food than was ordered. Bowels were confined until the eighth day. But when injections of ox-gall and warm water were given at that period, to break down the hard fecal matter, the patient, against my express orders, forced down, until everything that had been gained gave way.

Case II.—The same patient, two months later, submitted to a second operation, with the same nursing, and the same result. She had, I afterward ascertained, surreptitiously eaten unsuitable food, not being well watched, nor controlled, and at the final operation of the bowels the pain was excessive. Although she moves in good society, with every means at her command, the memory of the sufferings which attended the unloading of the bowels, at those particular times, prevents her from consenting to receive another operation.

Case III.—Mrs. O'N——, ruptnre through perineum, sphincter and one-third inch of rectum.

Patient thirty years of age, excellent physical condition. The Emmet operation carefully and exactly performed. In fact, I had come directly from operating on Mrs. S. C. P—— for a similar lesion, which finally resulted favorably, and the same assistants were with me, and the same steps were taken. This case was a sad failure, and was due to the fever consequent upon the operation, change of diet while confining the bowels, and to the collection of hard, dry fecal matter, which, with my own personal superintendence, was expelled, only with intense suffering, by the patient.

Case IV.—Patient of Dr. M——, recto-vaginal rent of one inch; the Simon-Emmet operation performed; patient in excellent condition; bowels confined; moved on the ninth day; sutures removed on the tenth day. Found on next visit the sphincter torn out. Patient undoubtedly had eaten more than was allowed. Is willing to undergo another operation, but having since borne a child, must wait until autumn.

Case V.—Patient of Dr. B——. In good circum-

stances; well nursed. The Emmet operation performed; bowels constipated; failure due to movement of the bowels on the ninth day, which was accompanied with intense suffering.

[A second operation, since performed upon the same patient with bowels kept open, was a perfect success.]

CASE VI.—The sixth failure was a young woman with first child, delivered with forceps. The Emmet operation was performed immediately; bowels confined with opium. Local erysipelatous inflammation developed on the fifth day, and the sutures were cut of necessity.

CASE VII.—The seventh failure, Mrs. M——, was a patient in good circumstances, and carefully nursed. The Emmet operation was performed; the bowels confined. The sphincter gave way on moving bowels ten days after the operation, the sutures being removed on the eighth day.

CASE VIII.—Dr. L——'s patient. The Emmet operation performed two days after confinement; poor preparation; opium given for two days on account of severe pain; laxatives on third and succeeding days, but no movement of bowels until the fifth day, then hard masses of fecal matter tore out sutures.

Thus of the 8 failures there were 7 Emmet and 1 Emmet and Simon operation. Seven patients had the bowels constipated for eight or more days, and one for five days.

Of the thirteen successful operations I will here briefly relate the history of the eight in which the bowels were kept relaxed after the second day. The five successes, *with* constipated bowels, had nothing unusual to which I wish to refer.

CASE I.—Mrs. S——, of Williamsburg, consulted me at the out-door clinic of the Woman's Hospital, in March, 1879. She was a German woman of about thirty years. The rupture, of one year's standing, extended through the perineum, sphincter ani, and full one and one-half inch up the recto-vaginal septum. The rectal mucous membrane was badly everted, congested and prolapsed, rendering exact appreciation of the anatomy of the parts quite difficult. The patient suffered excessively from this eversion and prolapsus, and the consequent loss of control of the bowel, and sphincter, and had been subject, during the last few months, to cataleptic convulsions.

I urged her to enter the hospital, but being unwilling to do so, I consented to operate at her home. Assisted by Drs. W. E. Bullard, J. H. Gunning, and Geo. Thompson, I performed the Simon operation, March 19, 1879.

I passed the sphincter sutures deep, and included a full half inch of the divided perineal body upon each side. The sutures were bent downward over the anus, the ends covered with a bit of rubber tubing. A hypodermic injection of 10 ℥ of Magendie was given. The urine was regularly drawn by Dr. Thompson, then a resident of Williamsburg, or myself. On the third day a teaspoonful of the comp. liquorice powder was given, and a liquid evacuation of the bowels was passed into the bed-pan; no straining was allowed. The same course was pursued until the tenth day, when the two lower, or sphincter sutures were removed, and the result was all that could be desired. At the end of the twenty-fourth day, with the patient in the Sims position, and with the Sims speculum, the rectal sutures were removed.

The woman has since been in excellent health, and although a portion of the perineal body remains unrestored, she feels so well she does not desire to be improved.

CASE II.—My second case in this list was a Mrs. R——, who consulted me for the relief from troublesome symptoms of a lacerated perineum, and sphincter ani. The accident had occurred a few weeks previous, and the family physician, although aware of the lesion, had believed, and so assured, the patient, that it would heal of itself. The Emmet operation, with relaxed bowels, gave satisfactory result.

CASE III.—Mrs. O'N——, No. 3 in list of failures. This second was also the Emmet operation, followed by open bowels after the second day, with perfectly successful result.

CASE IV.—A dispensary patient, in poor general health. Laceration extended full one inch above the sphincter. Drs. Bullard, Hardy, and Ida Bartlett assisted me in the operation. The bowels were opened daily, after the second day, by the comp. liquorice powder. On the fifth day she had a severe and exhausting diarrhœa. Nevertheless, the union was found to be perfect on removing the sutures.

CASE V.—Patient of Dr. F——. The laceration extended through the perineum and sphincter, and one inch up the recto-vaginal septum. The Simon operation was performed six months after the accident. Bowels kept relaxed after the second day. Patient had almost no nursing. The outer sutures were removed on the tenth day. The inner ones, of fine silk, were easily removed at a later date, by gentle traction, without using a speculum.

CASE VI.—Mrs. B——, patient of Dr. B—— (also No. 5 list of failures). The Emmet operation performed. Relaxed bowels, and patient perfectly comfortable through the whole period. Result, perfect success.

CASE VII.—Patient of Dr. B——. Laceration extended through perineum and sphincter only. The Emmet operation was performed three months after the accident. Bowels kept open. Successful result.

CASE VIII.—Patient of Dr. S——. A young woman nursing her first child. Two weeks after delivery, assisted by Dr. S—— and Dr. Hardy, I performed the Emmet operation. The bowels were kept relaxed after the second day. The sutures were removed on the tenth day. The result was highly satisfactory.

SUMMARY.—Thus, of thirteen successful cases, five had bowels confined, eight had liquid evacuations daily, after second day. Of these eight successes with open bowels, I claim that such results could not have been expected, nor obtained, had the bowels been confined. Three of these eight patients were too poor to pay for the necessary nursing, and six lived in crowded tenement-houses.

The statistics of the Woman's Hospital, as furnished me by Drs. W. E. Mosely and H. C. Coe, show that during the last three years there have been 23 patients suffering from lacerations through the sphincter ani, and 48 operations; of these 23 patients, 3 were in poor physical condition and were undoubtedly subjects of syphilis. These 3 patients received 16 operations; 2 were cured and 1 remained a failure. Deducting these 3 unusually bad cases and there remain 20 patients receiving 32 operations. Of these 32, 16 were successful, or about fifty per cent. were successes, and fifty per cent. failures.

These statistics certainly show that the operation when performed in the best regulated hospital, and by the best gynecologists in America, is often a failure. The Emmet operation is generally performed in the

hospital, with occasionally a modification of the Simon, when much rectal tissue is involved; and the bowels have usually been confined for ten days.

We have the best authority for confining the bowels if we wish so to do.

Dr. Sims, in 1855, recommends the constipation of the bowels for two weeks.

Dr. Thomas, in his first edition, advocates constipating the bowels until the sutures are removed on the twelfth day.

Dr. Emmet, in his recent work, minutely describes the operation. He has given more attention to the clinical study of the lesion, and the explanation of the details of the operation, and has accomplished more for the clear understanding of the methods, than any other surgeon. He recommends confining the bowels with opium for six or seven days, and the removal of the sutures on the eighth or tenth.

Dr. William Goodell, of Philadelphia, recommends in his work, that the bowels be locked up for nine days, the sutures cut on the seventh, and the evacuation to be produced by injections of warm soap-suds and sweet oil.

Dr. D. Hayes Agnew keeps the bowels confined with opium, cuts the sutures on the seventh day, and by means of saline laxatives on the eighth to the tenth day, moves the bowels.

Dr. J. Matthew Duncan closes the bowels with opium, cuts the sutures on the seventh, and moves the bowels on the eighth day.

Sir James Y. Simpson, 1877, recommends constipation of the bowels for twelve days.

Baker Brown recommends constipation of the bowels for two weeks.

Graily Hewitt, in the American edition, 1874, recommends constipating the bowels for ten to twelve days.

Schroeder says: "Care should be taken to prevent diarrhœa."

Undoubtedly, many failures outside the hospital are due to imperfect preparations and defective operations, but that these are the principal causes I doubt very much.

Such absolute failures have induced me to look up all the notes of operations which I have performed, and to draw the lessons which these facts teach.

Some of my cases being patients from the poorer classes, who have consulted me at Demilt Dispensary, or at the out-door clinic of the Woman's Hospital, were in no condition to pay me or a professional nurse. I have, therefore, sought for better methods, because dissatisfied with present results, and because I could not act as nurse and surgeon too. I have thus operated several times under unfavorable conditions at their homes. The treatment here described was followed: I gave the comp. liquorice powder, a bottle of magnesia or a seidlitz powder, after the second day, causing a liquid evacuation daily. Among those who were thus treated subsequently there has been *not one failure.*

Although I have not been able to witness the operation, I understand that Dr. Hunter, during the last year at the Woman's Hospital, has injected sweet oil into the rectum after the fourth day, but of late has changed the oil for warm water; but with exactly what percentage of recoveries I am unable to say. I think, however, the plan has not been altogether successful, as with his last patient, the bowels were constipated for eight days. But this reaching out for something new, and better than the old plan, shows that others besides myself realize that the former custom of constipating the bowels is far from satisfactory.

In Dr. Thomas's last edition (1880) he has described and illustrated this operation in his most admirable manner, and, following the lead of Dr. Granville Bantock, recommends confining the bowels for four days only, until primary adhesion has taken place; then, by the use of enemas and laxatives, to gently move the bowels daily; on the eighth or tenth day removing the sutures, after which the liquid evacuations should be kept up for a week or more, until the parts have become firmly united.

Since this paper was begun, and the statistics of the hospital procured, and my own more carefully studied, I have found in the library of the Academy, the American edition, 1882, of Dr. Arthur D. Eddis, of London, in which, on page 444, he says: "It is, however, unnecessary to keep the bowels confined. The plan of encouraging a daily evacuation by means of oil-enemata has stood the test of experience, and may with safety be recommended." Thus we have one of the latest works recommending, and not condemning, the practicability and the safety of a daily evacuation of the bowels.

Prof. Simon, whose writings have not been so generally read in America as they deserve, taught, both by precept and practice, the advantages of keeping the bowels relaxed after this operation. I am informed by one of his former pupils, that his success was quite remarkable.

I myself, as here related, have found this plan of treatment perfectly safe, far more successful, and attended with the minimum anxiety to the surgeon, labor for the nurse, and suffering to the patient.

Note.—On June 6, 1882, Dr. F. P. Stephens, of this city, requested me to operate on Mrs. ——, of Montclair, N. J. She had placed herself under his care for the relief from the effects of this accident. I found the laceration extending through the perineum and sphincter, but it did not involve the rectum. The Emmet operation was performed; the wires secured as here described. The bowels were moved daily, after the second day, by means of the comp. liquorice powder. The patient ate and drank, and was made entirely comfortable all through her confinement. The sutures were removed on June 16th, ten days after the operation. The result was, and is, a perfect success.

Rickets among the French.—The number of rickety children and hunch-backed adults of both sexes one meets with in France is something prodigious. According to a report lately published in a scientific journal, the number amounts on an average to 20,000 per annum, the female sex furnishing the greatest majority. Want, unwholesome food, and bad hygienic conditions would in a great measure account for these deformities, but the vile practice so prevalent among French mothers of too early hand-feeding their infants, or bringing them up on the bottle to the exclusion of the breast or the milk of an animal, is no doubt one of the principal sources of rickets, and lays the foundation for the malformation of the osseous system, and indeed for the great bulk of diathetic diseases that affect the inhabitants of civilized countries.

It is said that 10,000 infants are sent out from Paris annually to be nursed. Only 3,000 come back alive.

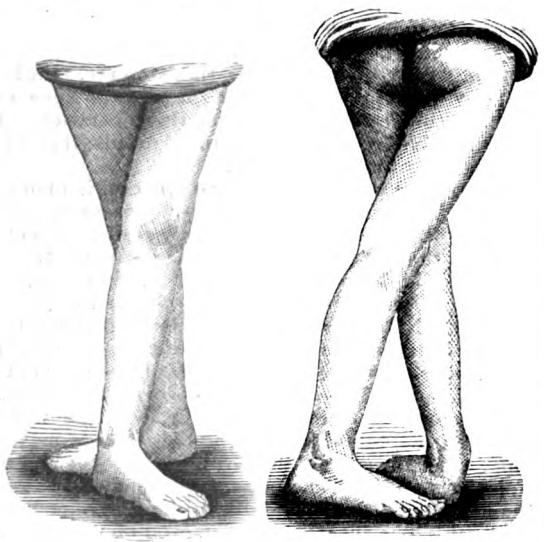
A CASE OF CROSS-LEGGED PROGRESSION.

By CHARLES T. POORE, M.D.,

SURGEON TO ST. MARY'S FREE HOSPITAL FOR CHILDREN, NEW YORK.

M. T——, aged seven, was admitted into St. Mary's Hospital, April 5, 1881. At time of admission, she was a delicate-looking child, bad teeth, pale.

The following is all the history that can be obtained. She walked well until she was four years of age; at this time she fell on the floor in such a manner that, when found, one limb was behind, "up against her back," her mother states, while the other was straight in front; there is doubt as to which limb was behind, but her mother thinks that it was the left. She suffered much pain in the limb that was thrown back, located in the knee, cried out at night, more especially in damp weather, was under no medical care. She was confined to her bed for some months and then when she began to go about, walked very lame, but no clear account of the manner can be obtained. Some months later,



while on the street, was knocked down and the other limb injured; since then she has been confined to her bed. For some time she has slept sitting up and leaning over a pillow.

On examination it was found that while in bed both limbs were extended and strongly adducted, so that at times they crossed. The right was rotated outward so that the foot laid flat on its outer border and forms with the antero-posterior diameter of the pelvis a right angle. The left limb was also rotated outward, but not to as marked a degree, and could be brought inward to a line nearly parallel with the antero-posterior diameter of the body, while it was impossible to alter the position of the right limb in this direction. The superior border of the trochanter major of both limbs was one inch above Nélaton's line. The right limb is half an inch shorter than the left. There was an elastic swelling two inches below trochanter major on left side. There was some lordosis. There was no swelling, thickening, or tenderness about either hip-joint, except the elastic swelling mentioned above. The fold of the nates was the same on both sides. Motion at the knee joints was normal. Patient complained of no pain either day or night, but resisted any attempt to move the limbs.

During the summer she was out of bed and allowed to go about. It was then noticed that she walked cross-legged, sometimes the right, sometimes the left limb being in front. The limbs were crossed at and a little above the knee. There was also some twisting of the pelvis toward the side on which the limb that was in front.

In June she was placed under ether, and a careful examination made. All movements except those in which the adductors were extended, were smooth and free. No crepitus or roughness of any kind could be detected in the joints. The adductors were strongly contracted and did not relax in the least under ether; it was impossible to overcome the rotation outward of the right limb by the use of any justifiable force.

Patient suffered no ill effects from the examination. She was able after it to flex and extend her limbs.

Hip-joint disease seemed to be excluded. In November she was again placed under ether, and a careful examination made by Dr. George A. Peters, but without throwing any further light on the case. After this last examination she complained of pain in the right knee for a day, but since then was about as before.

December 5th, patient was placed under ether and carefully examined by Drs. George A. Peters, Sands, and Mason.

The following was the result of the examination:

First.—That there was strong contraction of the adductor muscles, and rotation outward of both limbs; the right was rotated to a greater degree than the left and could not be turned inward.

Second.—That both trochanter major were one inch above Nélaton's line.

Third.—That there was shortening of the right limb half an inch.

Fourth.—That there existed a semi-albuminous crepitus in left hip-joint.

Fifth.—It was the expressed opinion that there was an absence of the recognized symptoms of hip-joint disease.

Sixth.—Tenotomy of the adductors of both limbs, as far as was considered safe, was advised.

Tenotomy was accordingly done of as many resisting bands as were not too deep. The limbs could then be abducted to about three-fourths normal abduction, but no change could be made in the rotation outward of the right limb nor any improvement in the left. Patient was placed in bed with her limbs separated.

The wounds healed, and after two weeks she was allowed to get up and go about. She did not walk cross-legged, but locomotion was not improved, rotation outward still continuing. On January 9, 1882, she was placed under ether. No change in the joints can be detected.

The cyst on the outer aspect of left thigh was opened, and considerable caseous matter evacuated. On examining the cavity with the finger it was found to extend upward and inward, so that the finger passed inside the trochanter major. Considerable bony detritus was found in the upper part of the sinus. On crowding the finger inward, the neck, and as much as could be felt of the head of the femur, were found to be extensively diseased.

On February 6th the left hip-joint was excised. The head and neck were only represented by a small spur of bone. The shaft was healthy.

The acetabulum was not increased in any direction, and was only diseased over a small spot in its lower border.

An examination of the part removed shows that the disease is limited by the epiphysis of the trochanter major. Since the operation, pain characteristic of hip-joint disease has developed in the right joint.

There are a few points of interest in this case which I have placed under the following heads:

First.—What was the original injury?

Second.—The cause of the abnormal position of the trochanters.

Third.—The inequality in the length of the limbs.

Fourth.—The cause of the peculiar mode of progression.

First.—There is a question as to which limb was thrown backward; if we assume that it was the right and not the left, may there not have been a rupture of one or both bands of the Y ligament, permitting the limb to fall outward (rotated), and would not continued rest in bed, with the limb in such a position, have resulted in it becoming fixed (rotated outward)?

If the left limb were the one thrown behind, then the position of the right limb can only be accounted for on the supposition that, after the second injury, the joint became diseased and gradually assumed the position it occupies by slow pathological changes taking place in it, and faulty position.

Second.—The position of both trochanters one inch above Nélaton's line. This was due in the left limb to destruction of the head and neck, and not to any dislocation or change in the long diameter of the acetabulum. It would be reasonable to attribute the position of the right trochanter to a similar cause, as that joint is certainly diseased.

Third.—The inequality in the length of the two limbs, the trochanters being on the same plane, can be explained by congenital shortening of the right limb.

Fourth.—What was the cause of the cross-legged progression? There being hip-joint disease on one side, the limb rotated outward and adducted. In order to bring about parallelism of both lower extremities, the pelvis on the diseased side must be raised. Now the other joint becoming diseased, being adducted and rotated outward, and the pelvis tending to assume a horizontal position, a crossing of the limbs becomes a necessity.

There is another explanation that may be given. The right limb being rotated outward and held in this position, the knee-joint could not be used, and was practically anchylosed, as far as any use in locomotion was concerned; this, with contraction of the adductors, would throw the limb beyond and to the opposite side of the median plane of the body; a similar condition of the left, together with the necessity to keep her balance, would cause the peculiar gait found in this case. If one strongly rotates outward both lower limbs and contracts the adductors, he must walk cross-legged. I think that the contraction of the adductors was secondary to the rotation outward; if it had been primary, I think that tenotomy of these muscles would have permitted some correction.

As far as I can ascertain there have been but four cases of this deformity reported, although it is not as uncommon as I at first supposed. In Langenbeck's *Archiv* for 1877 (vol. 21, page 828), is a short report of a case that was treated in Esmarch's clinic. It occurred in a girl twelve years of age, with congenital dislocation of both hip-joints. Her power of locomotion seems to have been better than in any of the other cases.

Mr. Lucas, in the "Transactions of the Clinical Society of London," 1880, reports two cases:

Case II.—A boy aged ten had hip-joint disease on left side when four and one-half years of age; was discharged after some years; went about with a splint; fifteen months later, fell and injured the right thigh. After treatment for some time he was discharged, and six months later was found to walk cross-legged. There was slight motion in the right hip. Both hips had undergone pathological dislocation.

Case III.—Man aged forty-seven; hip-joint disease, left side, of ten years' duration. Nine years later, one year before examination, disease began on the right side. After a time he began to cross his legs; at first was able to unlock them. At time of examination both hip-joints were anchylosed. There was no dislocation.

Case IV.—Mr. Tyson, at a meeting of the Clinical Society of London, April, 1881, presented a patient sixty-seven years of age, who, fifty-three years previous, when fourteen, fell and injured his right hip-joint; was confined to his bed for four months; since then has never been able to go astride a horse. Sixteen years ago he began to have difficulty in walking, his legs becoming more and more approximated; for the last fifteen months he has walked cross-legged. There was only slight motion in the hip-joints; the bone seemed thickened. Both extremities are extremely adducted and everted; heels far apart; toes close together; knees not affected.

Although it is not stated in the text, an examination of the plate in Mr. Lucas's cases shows that the limbs in both cases were everted and strongly adducted. In all these cases there was strong evertion and adduction; in one, there was congenital dislocation of both hips; in one, pathological dislocation; in two, anchylosis, more or less perfect in both joints; while in the case under my own observation the joints are not fixed.

Although it does not come under discussion in this paper, it is worthy of notice how extensive disease there may be in a joint without any positive symptom.

Small-Pox in Birds.—Dr. William Gayton, Medical Superintendent of the Small-Pox Hospital at Homerton, England, writes (*British Medical Journal*) concerning this subject as follows:

"Apropos of 'small-pox in birds,' I may, perhaps, mention the fact that some years ago, a former steward of this hospital was in the habit of breeding a large number of canaries. As these arrived at maturity it was a common occurrence to find many of them dead, and presenting evidence of having suffered from some eruptive disease. It was further observed that, when the hospital contained a somewhat large number of patients, the mortality among the birds increased, and *vice versâ*."

Sudorific Treatment of Typhoid Fever.—Mr. Richard Ryder, praises highly (*British Medical Journal*) the sudorific treatment of typhoid fever, which he has employed for twelve years. He takes incipient cases, and keeps up a continual sweating for eight or ten hours. This is repeated as often as the temperature rises very high. He sweats his patients by covering them with blankets and a macintosh sheet.

SLEEP.

By J. LEONARD CORNING, M.D.,

NEW YORK.

THE physiological factors which are more or less intimately connected with sleep have long been subjects of speculations of a more or less philosophical nature. In recent years, considerable light has been thrown on the nature of those phenomena which are most concerned in the production of that state of the system in which the energies of the various component parts of the organism are more or less reduced. One of the most striking facts to be considered in this connection is the observation that the temperature above the cerebral hemispheres is lower during sleep than during wakefulness. In inverse ratio it has likewise been remarked, that insomnia frequently goes hand-in-hand with a flushed face and heated vertex. When we duly consider these things, there will be found slight matter for surprise that experimenters should have sought to establish the connection subsisting between the sanguineous ebb and flow in the cerebrum on the one hand, and the conditions of sleep and wakefulness on the other.

A priori reasoning on this subject had been indulged in by the older writers on this and kindred physiological themes; indeed, the idea that the brain is in a state of comparative anæmia during sleep has been postulated on purely theoretical grounds by certain physiologists. Only, however, in recent years has actual experimental research contributed somewhat to our more exact knowledge of those factors which are more or less directly concerned in the production of the interesting group of phenomena known as sleep. Of the various writers who have contributed to our knowledge on this subject, there is not one who has done more for our physiological enlightenment respecting the nature of sleep and its accompanying phenomena than Dr. William A. Hammond. And certainly those same phenomena constitute worthy objects for our attention, more particularly when we reflect that about one-third of human existence is passed in sleep.

It was Durham, who, in 1860, demonstrated on dogs the anæmic condition of the brain during sleep. He trephined a piece of the skull, and cementing a watch-glass over the opening, observed that when the animal was awake, the vessels of the pia mater were moderately distended, whereas during natural sleep the brain retracted and presented a pale appearance. The contrast between the aspect of the brain during its functional activity and during its condition of repose is said to have been remarkable.

One of the most lucid expositions of the various questions involved in the consideration of sleep is Dr. William A. Hammond's classical work on "Sleep and its Derangements." I acknowledge my indebtedness to the above monograph for many valuable facts bearing upon the question under consideration. In a monograph of recent date, I have quoted Dr. William A. Hammond's remarkable case of cranial injury, which demonstrated beyond any reasonable doubt the comparatively anæmic condition of the brain during sleep.

Nothing more natural than that after these observations, investigators should have sought to produce sleep by artificially reducing the blood-flow to the brain. Equally to be expected was their selection of the carotids as the arena of their experimental exploits. Simple anatomical considerations would have pointed to these arteries as constituting that portion of the cerebral vascular system at which artificial obstruction could most easily be interposed. The result of experimental compression of these vessels would seem to have sufficiently proven that a diminished blood-supply to the cerebrum induces somnolence.

I have myself produced sleep in this way on numerous occasions (*vide* a short article in THE MEDICAL RECORD for February 18, 1882, and a subsequent monograph entitled "Carotid Compression and Brain Rest," published by Anson D. F. Randolph & Co., New York).

In the above-mentioned communication, the fact that the soporific effects of carotid compression were known to the ancients has been alluded to. But we must not forget that they practised compression on the basis of an empty empiricism, and before the discoveries of modern physiology had elevated medicine from a conglomeration of dexterously formulated ambiguities to the dignity of a progressive science.

The topographical position of the carotid, however, is—for the sake of the logical completeness of the argument, which assumes cerebral anæmia as the proximate cause of sleep—an unfortunate one. Owing, namely, to the contiguity of the artery to the pneumogastric nerve, there are those who affirm that compression of the carotid is only another name for pressure upon the pneumogastric. Now the fact is, that it is much easier to compress the carotid *without* the nerve than to compress the latter without the artery. And I believe there is little doubt that those who thought they were exercising pressure solely upon the nerve were in reality expending their energies upon the artery. The analogy which exists between the physiological effects of ligation and those obtained by compression has been cited by me in former publications as a fact calculated to effectually exclude the theory of pneumogastric agency in the production of soporific phenomena. To be sure, we must not ignore the fact that the effects of ligation are not invariably the same, and that even the effects of compression are subject to a certain amount of variability. These facts may doubtless in a measure be accounted for by the anastomotic variability at the circle of Willis. I am inclined, however, after having used my best efforts to exclude sources of error from my own experiments, and after having examined at considerable length the researches of others in this domain, to find in anæmia of the brain, which term, as a matter of course, includes reduced oxygenation, one of the most prominent factors in the causation of sleep.

As regards the primary impulse, which forms the first link in the chain of physiological events, which culminates in the production of anæmia, I am induced to perceive such a rudimentary behest in the periodic exhaustion of the available intra-ganglionic energy. I am confirmed in this my opinion, that the two great physiological factors of sleep are ganglionic exhaustion and cerebral anæmia, by my own observation that *a certain degree of* compression of the carotids is much more fruitful in the production of soporific effects toward evening than in the early hours of morning. In other words, somnolence by compression of the carotids is more quickly obtained after an expenditure of motor and psychical energy than directly after the brain

has been in a state of repose for a considerable length of time. This fact, I believe, forms the solid basis of an argument in favor of the view that the ganglia are capable, through the benignant influences of rest, of hoarding up a *certain* amount of available explosive energy, which renders them (the ganglia) in a measure independent of the necessity of extensive assimilation from the plastic materials of the blood-stream, at least *for a time*. We must not forget, however, that what we are here considering is a *certain degree* of compression—an amount which, though it would cause somnolence toward evening, would not do so during the hours of early morning, when the central nervous system is in a state of *plastic* rejuvenation. If it be asked what certainty we possess—that, in the instance cited above, the *primary* soporific effects might not be owing to a curtailment of oxygenation, I reply, that in both cases the degree of compression was the same; consequently the amount of oxygen conveyed to the brain was in both instances the same. Consequently the somnolence obtained after psychical or motor activity must have been primarily inaugurated by some change which had taken place within the ganglia during the day—a change equivalent to a condition of *hors de combat* of the intra-ganglionic substance.

Let those who have philosophized about this exhausted condition of the ganglia *call* the phenomenon what they please. Let them talk about cessation of interplasmatic activity, due to the collection of débris within the ganglia or molecular inertia, or anything else, the fact remains the same.

But does what has been said, then, exclude reduction of oxygenation as a causative factor in sleep? Not at all. What I would insist on is simply this: that anæmia, which among other things is equivalent to reduced oxygenation, is, under normal conditions, initiated by intra-ganglionic exhaustion; and that when anæmia, *within certain limits*, is brought about, either through the operation of physiological law or by means of artificial appliances, its effects as a concomitant physiological factor in the production of sleep will be directly in the ratio of the intra-ganglionic exhaustion (always assuming, of course, the absence of irritation within the plasma of the ganglia themselves). I would repeat, when the anæmia is *not carried beyond certain bounds;* for if it so be, either through the agency of perverted physiological law, or by artificial means, a state of unconsciousness may be induced irrespective of ganglionic exhaustion; but this condition has far more in common with what is known as stupor than with *physiological* sleep.

There has been much argumentation as to whether sleep is cerebral anæmia pure and simple, or whether its whole nature is expressed in the term ganglionic exhaustion. Others there are also who, while recognizing in experimental results undeniable proofs of the anæmic condition of the brain during sleep, still persist in perceiving in this anæmia only one of the *collateral* and unimportant effects of ganglionic exhaustion. To corroborate this most gratuitous assumption of the unimportance of the position which anæmia occupies among the causative factors of sleep, they have cited the observation that gourmands frequently sleep after enormous meals, their red and swollen features meanwhile bearing ample witness to the condition of cerebral hyperæmia. They forget, however, that there is a vast difference between the condition of partial *stupor*, engendered by such causes, and the healthy *physiological sleep* which the laborer enjoys after a day of toil. The truth of the matter seems to be that the term sleep, when employed to designate more particularly a condition of rest of the central nervous system, means, physiologically considered, a similar condition of things to that which prevails during inactivity in certain tissues, which are subject to periodical exacerbation and diminution of function, as, for example, the glands. The temperature in these structures is found to be much lower during rest than during functional activity. It has also been observed that the temperature of muscles is higher during activity than during rest. Now a rise in temperature, among other things, means the conveyance of an increased amount of oxygen to the tissues within a given length of time, or, in other words, a condition of physiological hyperæmia. Inversely, rest takes place in the tissues as a co-sequence of reduced oxygenation and intra-plasmatic exhaustion. Strikingly suggestive as these analogies are in themselves, there are, moreover, the *direct* proofs of the exceptionally dependent condition of the brain on the good offices of the blood-stream, as seen in the remarkable phenomena induced by cerebral hyperæmia and cerebral anæmia. Sleep, therefore, may be considered as the sum of the phenomena expressed in general terms by the designations cerebral anæmia *and* intra-ganglionic exhaustion.

If it be asked: Wherein lies the practical utility of such considerations as the foregoing? the reply, pure and simple, is this: That for the proper understanding and treatment of that great curse of a relentless civilization—insomnia—a proper understanding of the physiological requisites of *natural* sleep is an indispensable necessity.

Skin-grafting from Rabbits.—Dr. Lamallerée, of Paris, several months ago, performed an operation of skin-grafting, employing grafts obtained from two different sources, a human being and a rabbit, those from the latter evincing a superior amount of vitality. The patient, a man thirty-seven years old, had suffered for six years from a varicose ulcer of the left thigh, which resisted every form of treatment. The ulcer was 14 centimetres long and 8 deep. At the request of the patient, Dr. Lamallerée determined upon skin-grafting, for which he obtained six grafts from the abdomen of a rabbit, it having been previously shaved, and two from the forearm of a man. These having been placed in position, a Lister dressing was applied. After the lapse of eight days, this was removed, and it was found that those furnished by the rabbit had become adherent, and that new skin was forming rapidly in their immediate neighborhood. On the other hand, the two which had been taken from the man had not adhered. The dressing was continued eight days longer. When it was removed, an islet of skin, 10 centimetres long and 7 wide, was seen to have established itself upon the centre of the ulcer. The dressing was again reapplied, and maintained *in situ* for eight days, at the completion of which it was taken off, and it was found that the sore had completely cicatrized. Two months later the patient was again seen, the healing process was progressing favorably, and the newly formed skin showed no trace of its origin.—Dr. E. C. Vidal, in *Monthly Review of Med.*

The London Pathological Society is so overrun with specimens that special meetings are necessary to consider them.

Progress of Medical Science.

FATAL POISONING WITH CHLORATE OF POTASSIUM.—Dr. Lingen publishes in the *St. Petersburger Medicinische Wochenschrift* (March 6 1882), the history of a fatal case of poisoning from the immoderate use of chlorate of potassium. The quantity of the drug ingested was not accurately ascertained, but it probably amounted to several ounces. The initial toxic symptoms were thoracic oppression, tremor, repeated vomiting, diarrhœa, restlessness, gastric pain and asthenia. The patient lived a week after the first appearance of the symptoms. During this time asthenia became gradually more marked. The urine was dark-red, notably diminished, and contained a large quantity of albumen with blood casts, disintegrated blood corpuscles, renal epithelium, and granular detritus. Vomiting occurred from time to time. Death from asthenia. No autopsy was held. Dr. Lingen supplements the history of his case by quoting the pathological conditions observed by Marchaud in a series of fatal cases of potassium chlorate poisoning. The blood was of a pure brown chocolate color; the kidneys were enlarged; the urinary tubules in the medullæ were distended with peculiar granular, brownish casts, containing disintegrated blood corpuscles. Dr. Lingen concludes, however, that chlorate of potassium may be safely employed internally, in doses amounting to one drachm per diem.

SIMULTANEOUS OCCLUSION OF BOTH URETERS BY RENAL CALCULI: DEATH AFTER ANURIA OF FIVE DAYS' DURATION WITHOUT URÆMIA.—Dr. H. Haehner published in the *Berliner Klinische Wochenschrift* for September 12, 1881, an elaborate history of a case, the main features of which are indicated by the above title, together with a report of the autopsy. The patient was a previously healthy man, aged fifty-one years. On October 20, 1881, he engaged in more active physical exertion than usual, and shortly afterward observed a clot of blood in his urine. He had not received any injury. The expulsion of the coagulum was unattended by pain. On the two following days the patient passed an unusually small quantity of urine and suffered from slight rectal tenesmus and fever tympanites. During the night of October 22d, severe paroxysmal pain was developed in the hypogastric and lumbar regions and radiated into the testicles.

The pains continued to recur at intervals, and the urine which contained a few coagula, to diminish in quantity until complete anuria became established on October 25th. From that time until the patient's death, on October 30th, no urine was voided and none reached the bladder. Tumors developed in the lumbar region, corresponding to the location of the kidneys, and intense pain continued. Diaphoresis and catharsis were artificially induced. There was slight delirium but no marked uræmic symptoms were noted.

The tumor in the right lumbar region was punctured on October 30th, and 100 grammes (3 ounces) of clear, acid fluid, which responded to the murexide test, but had no urinous odor, were withdrawn. The general condition was unchanged by the operation; dyspnœa appeared and developed into orthopnœa. Death from asthenia and dyspnœa occurred on October 30th. The autopsy showed complete occlusion of both ureters by calculi, varying in size from that of a lentil to that of a pea. Similar ones were impacted in the pelvis and in the calices, and the intervals between them were closely packed with gravel. None of the calculi were of such large dimensions that they might not have singly passed through the ureters, but they were firmly wedged into the latter and cemented together by the finer calculous particles. Both kidneys were immensely dilated. The mucous membrane of the pelvis was ulcerated and ecchymotic. Dr. Haehner supposed that the unusual exertions of the patient just before his attack caused the descent of the calculi from the pelvis and their impaction in the ureters. The absence of uræmic phenomena was attributed by him to the copious evacuations and the abundant diaphoresis induced by remedies.

THE CLINICAL SIGNIFICANCE OF RETRACTILITY OF ALBUMEN.—Dr. Rodet devotes an article in the *Lyon Médical* for April 23, 1882, to a refutation of Professor Bouchard's views relating to the possibility of distinguishing the albuminuria of renal disease from that complicating various other pathological conditions. Professor Bouchard believed that he had discovered a distinctive physical condition characteristic of albumen present in urine as the result of nephritis. This was a so-called retractility on the part of the albumen, manifested by its assumption of a form distinctly seen with the naked eye to be flocculent. Flocculent or retractile albumen was, according to his view, normal serum albumen, which could only be present in the urine in virtue of some renal disease. Non-retractile albumen, or albumen which presented a homogeneous, whitish aspect on coagulation, was, on the other hand, abnormal albumen, capable of penetrating normal renal epithelium by dialysis. Dr. Rodet subverts Professor Bouchard's theory by showing that the two forms of albumen in question owe their peculiar character to the chemical nature of the coagulating reagent. "Retractile" albumen appears when acetic acid is added to the urine before precipitation of the albumen, and non-retractile or homogeneous albumen when an alkali has been previously added. Dr. Rodet also calls attention to the fact that even the coagulated albumen of homogeneous appearance consists, in reality, of flocculi too minute to be detected by the naked eye.

PHTHISIS PULMONALIS ENDING IN RECOVERY OR IN ARREST OF THE DISEASE.—Dr. Francis Minot, Physician to the Massachusetts General Hospital, publishes the history of seven cases of pulmonary consumption in the *Boston Medical and Surgical Journal* for May 4, 1882. Three of them may be considered as examples of recovery. One of them was, however, followed, after ten years, by a fatal recurrence of the disease. In the first case which recovered there were, for several months, conclusive physical evidence of phthisis at the apex of the right lung. Two years later all signs of the disease had disappeared, and the patient's general health was excellent. Another case was characterized by well-marked symptoms and signs of phthisis. This patient's improvement was rapid and his recovery apparently complete. After eleven years he died of a cardiac affection. In the third case of recovery a recurrence took place after ten years and proved fatal six months later. The treatment was conducted in accordance with generally accepted principles. The patients were enjoined to remain as much as possible in the open air, except on stormy days; never to remain in rooms warmed by furnace heat unless there

were also an open grate fire; always to sleep at night with a window partly open; to take a daily sponge-bath, not so cold as to occasion chilliness; to wear suitable woollen underclothing, both summer and winter; and to fully inflate the lungs at regular intervals throughout the day, in order to stimulate the pulmonary circulation, especially that of the apices.

LICHEN PLANUS AFFECTING THE MUCOUS MEMBRANE.—At a meeting of the Medical Society, of London, March 27, 1882, Dr. Radcliffe Crocker presented a case of lichen planus affecting the mucous membrane as well as the skin, furnishing also the history of two other cases. On the skin and glans penis, in the case presented, the usual characteristics of the disease were present, but upon each side of the raphé of the tongue symmetrical white patches were found, and the buccal mucous membrane exhibited white streaks extending from the parts adjacent to the last molar teeth to the lips. In the other cases the mucous membrane of the cheeks presented similar characters, but the tongue was affected on the sides only. The point of interest was that the lesion of the mucous membrane preceded those of the skin by some weeks, in at least one instance. Mr. Hutchinson is said to have been the first to notice these white patches in connection with lichen planus. Though occurring only in a certain number of cases, when present the symmetry of the patches on the tongue and fern-like branching of the white streaks were the points specially noticed. The possibility of their preceding the skin lesions gave them importance from a diagnostic point of view.—*The Lancet*, London, Eng., April 8, 1882.

A DISEASE OF THE MAMMARY AREOLA PRECEDING CANCER OF THE BREAST: PAGET'S DISEASE.—Dr. C. B. Porter, Surgeon to the Massachusetts General Hospital, publishes an interesting article (embodying the description of a case) upon the above subject, in the *Boston Medical and Surgical Journal* for May 4, 1882.

Sir James Paget first described the disease in question in the *St. Bartholomew's Hospital Reports* for 1874, having observed fifteen cases up to that time. The patients were all women, from forty to sixty years of age. In all the cases the disease began as an eruption on the nipple and on the areola. It usually had the appearance of a florid, raw, finely granular surface, from which the epidermis seemed to be absent. A greater part, or the whole of the nipple and of the areola was usually involved. A copious, clear, yellowish and viscid exudation flowed from the diseased surface, which was the seat of tingling, itching, and burning sensations. The general health remained good. The eruption did not extend beyond the areola, nor did it produce subcutaneous ulceration in Paget's cases. It resembled either chronic eczema or psoriasis. In the latter form it was observed to extend beyond the areola, in a few cases. In all those studied by Paget, cancer of the breast followed the eruption after an interval usually of one year, but in certain instances of two years. The cutaneous disease resisted all treatment, both local and general, and continued even after the appearance of genuine carcinoma. The cancer was never first developed in the diseased skin, but in the mammary parenchyma, beneath or not far from the diseased cuticle, and was always separated from the latter by an interval of apparently healthy tissue. The cancers were mostly of the scirrhus variety, recurred after extirpation, and terminated in death. The case described by Dr. Porter occurred in the person of a woman aged fifty years. Two years before she came under Dr. Porter's observation, she noticed "three little pimples, like water blisters," near the right nipple. They caused neither pain nor inconvenience. They soon discharged, causing adhesion of the garments to their surface, and were followed by the eruption of new vesicles. After nine months, sharp pains were felt in the nipple and breast. Two years after the appearance of the disease the areola and its immediate neighborhood were involved in the disease, which presented essentially the same characters as those described by Sir James Paget. The eruption was dry and scaly in parts, and consisted of soft, moist scabs in others. The surface beneath the scales and scabs was raw, red, and granular. Around the edge of the scaly patches were minute vesicles, some of them covered with small dry crusts. The breast also presented the typical signs of cancer. It was, therefore, removed, the wound healed by first intention, and no recurrence had been observed after a year. On examination of the breast, the nipple was found destroyed by a cancerous growth of the epithelial type. In some of the milk-ducts there was an abnormal growth of epithelium, which had led to carcinomatous infiltration of the glandular parenchyma. Mr. Butlin has reported two similar cases, from the study of which he reached the following conclusions: (1) A certain relation existed between the eczema of the nipple and areola and the carcinoma of the breast. (2) One of the first effects of eczema was to produce proliferation of the mucous layer of the affected epidermis. (3) In the course of time the epithelium of the galactopherous ducts became similarly affected. (4) The disease gradually involved the smaller ducts, then the acini, and, finally, the parenchyma. (5) The carcinoma thus developed was essentially epithelial in character.

Dr. Thin applies the term "Malignant Papillary Dermatitis" to this cutaneous affection, which has also been described by Dr. S. W. Gross, in his work on "Tumors of the Mammary Gland."

THE EPITHELIA OF THE KIDNEY.—In the June number of the *New York Medical Journal and Obstetrical Review*, Dr. Henry B. Millard gives an account of his researches in the anatomy of the renal epithelia, and thus sums up the results: 1. The rods discovered by Heidenhain in some varieties of the tubuli uriniferi are part and parcel of a reticulum present within every epithelium. 2. The reticulum, including its elongated rod-like or sheath-like formations, is the living matter proper. 3. The relation of the rods to the rest of the reticulum of an epithelial body varies greatly, the variation probably being due to different stages or degrees of secretion. 4. The reticulum, including the rod-like formations, in the inflammatory process, both in catarrhal and in croupous nephritis, gives rise to a new formation of living matter, which results in the new formation of medullary corpuscles or pus corpuscles. 5. The structureless membrane is lined by flat endothelia lying between it and the basis of the epithelia of the urinary tubules. 6. In nephritis the endothelia become considerably enlarged, and, in catarrhal as well as in croupous nephritis, they line the urinary tubules after the epithelia have been shed or lost; they surround the cast in croupous nephritis after the epithelia have perished in the formation of the cast.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, July 1, 1882.

CONTAGIOUS EYE DISEASES IN SCHOOLS AND ASYLUMS.

We are so often assured of the great interest taken by the profession on all matters pertaining to the proper sanitary regulations of public schools, that we are encouraged to continue the discussion of the subject by presenting such facts and conclusions bearing upon it, as may from time to time be presented from different points of observation. We have so often commended the efforts of the State Board of Health of New York in diffusing useful knowledge on all questions relating to public health, and particularly to school hygiene, that it is almost useless to say that a recent tract on "Contagious Diseases of the Eyes in Schools and Asylums," by Dr. C. R. Agnew, of this city, published under its auspices, is a timely and instructive document. Dr. Agnew points out, in a forcible and direct manner, the prevalence of communicable eye disease as one of the many evils which exist in the method of treating children upon the congregate plan in schools and reformatories. Some time ago he was called to a school, in one of the counties of this State, in which several hundred children had been gathered, chiefly from the streets of the city, and found more than half the inmates, one hundred and fifty in number, suffering from a malignant type of purulent ophthalmia. The disease had proceeded so far that several cases of blindness had already occurred, both among the scholars and their attendants, five children having lost both eyes, and seventeen children having each lost an eye. It was safely estimated that at least five per centum of these pupils would become blind in one or both eyes, and that a considerable number, probably one-half, would have such morbid changes produced in the conjunctiva as would render them liable to constantly recurring ophthalmia.

When it is considered that, with proper sanitary regulations, such a widespread and damaging epidemic could have been prevented, the picture is a saddening one in the extreme, and reflects seriously upon any system of management which makes such a condition of affairs possible. It is hardly necessary to say that the mere presence of such a disease in any school or reformatory is severely censurable, as showing a want of knowledge of the most ordinary rules of sanitation. Hence, we are not surprised to learn that there was no care whatsoever exercised in quarantining the sick ones, no measures taken for proper examination of the eyes before admission; that the lavatories were insufficient, the food and drainage were bad, and the institution was overcrowded. And here comes in the old argument for competent medical inspection of all institutions in which children are congregated, either for purposes of education or physical training, or both.

In fact, until such is accomplished, we shall continue to have the experiences, as are recounted by our distinguished ophthalmologist, constantly repeated.

There is, however, even a melancholy satisfaction in all this. The public need to be educated to the importance of the measures advocated, and no more effectual means to such an end can be instituted than by the constant reiteration of the principles which underlie the prevention of contagion, and the removal of the causes of crowd poisoning.

In this little history of communicable eye diseases, we have illustrated all the usual effects of neglect of quarantine, insufficient ventilation, defective lavatories, imperfect sewerage, and bad food. Perhaps the whole matter could not be more effectually placed in a nutshell than by quoting the following extract from a letter written to Dr. Agnew by a physician recently appointed to one of these reformatories, detailing the results of his first medical inspection:

"A strong odor of sewer gas pervaded the building, which proceeded from several foul and entirely unventilated pan water-closets, the soil pipe from which emptied by means of a leaking sewer, which was also without trap or ventilator, into an adjoining privy vault, the discharge being entirely below the water line. No fresh air was admitted to the soil-pipe or sewer. The kitchen and laundry waste was discharged upon the surface of the ground, *the latter under its floor*. The institution contained three hundred and eight children, crowded together in close, unventilated rooms, sunlight and air being rigidly excluded. In one sleeping apartment *above* the laundry these children were placed two and three in a bed, with *less* than *one hundred and twenty-five* cubic feet of air apiece, the windows and blinds being closed. Fortunately no water-closets had been placed here, but two tin slop pails, placed in the centre of the room, were used instead. The food was of poor quality. I believe but ten quarts of milk were furnished daily. Two troughs, sixteen

feet in length, answered for a lavatory, all washing in the same water, while the few towels in use were employed indiscriminately. Sore heads were almost universal, dependent principally on the vermin inhabiting them. The itch was also very prevalent. I subsequently learned that several children had died from *cerebro-spinal meningitis*. Forty-eight children and attendants were suffering from fully developed purulent conjunctivitis. Perforation of one cornea had already taken place in three cases, of both cornea in one case. *Six cases had been removed to hospital. Of these*, three lost both eyes. Three lost one eye, each. The disease had prevailed the preceding year, just how extensively, I was unable to ascertain; but the institution still contained five children who had lost both eyes, and seventeen who had lost one, each, at that time.

"*Of the remaining children scarcely one could be said to possess a healthy conjunctiva.*"

The question now comes up, as to what can be done to remedy such evils, aside from enforced sanitary inspection. Obviously, the State is competent to fix some standard of requirements, which shall be uniform and binding upon all public schools and reformatories. This should certainly be advised by our State board. The following suggestions of Dr. Agnew look in the proper direction of initiating the necessary reforms, and will doubtless shape some of the recommendations soon to be offered by the health authorities.

He believes that schools and reformatories should be licensed by the State, under a general law like that, for instance, determining the capacity of emigrant ships, so that overcrowding and bad food would be impossible without a misdemeanor on the part of their managers. The license should state in terms what cubic air space must be secured for each inmate and what the dietary must be. Then no school or reformatory would have more inmates than the building should contain or its resources properly maintain, and societies for inquiry and advice would have some definite duties to perform with reference to them. The law should fix a minimum of eight hundred or one thousand cubic feet of air space for every such inmate, and at least one quart and a half of good milk, of definite purity, besides other specified food for each inmate, and also determine methods of applying the principles for drainage and ventilation and out-of-door work and amusements.

THE RADICAL CURE OF CANCER.

The most recent utterances regarding the possibility of radically curing cancer have been of a hopeful character. While the pathology of the disease is not positively and completely known, yet the tendency of later researches is not unfavorable to the view that there may in time be some kind of specific for it discovered. Epitheliomata and even the more malignant forms are cured by the knife in a few cases. There is very good evidence that by internal medication uterine cancer in its early stages has been checked, if not permanently removed.

Coming at this time, therefore, when the horizon is brightening a little, the stimulus of so large a prize as that offered through Dr. J. Collins Warren, of Boston, Mass., ought to secure something of value. It should be remembered that the prize is not necessarily for a specific remedy for cancer, but for the best essay upon the probability of the discovery of a cure of the malignant disease, and the line of study or experimentation likely to bring such a cure to light.

There is an assured position and reputation to the person who can worthily win a prize on so important a subject. We trust that it will be widely competed for.

THE LAST OF GUITEAU.

The petition for a respite to Guiteau was refused, and the assassin will have met his fate before this writing appears.

There is but little more to be said now of the case. It has already excited vastly more attention than it deserved. Guiteau, and all Guiteaus should, in the present stage of society, be considered responsible, and should be punished. The protection of society and the demands of justice alike call for it.

There has been much said of late about "the best leading experts," and how sure they are that Guiteau is insane. These experts are quite entitled to their opinion, but it is a mistake to suppose that they represent all the best and widest experience in psychiatry. That in the future Guiteau will be considered insane and irresponsible we cannot believe, assuming that futurity will interest itself in the assassin at all.

Guiteau was the victim of a peculiar psychosis. He was not sane, but we hold that future jurists and experts will find themselves in trouble if they class this psychosis strictly among the insanities. The difficulty that will arise has already shown itself. The insane man cannot do a criminal action; he is not and cannot be criminally responsible. This truth has rarely been questioned. Yet society cannot and will not tolerate the idea that so-called "reasoning maniacs," of the Guiteau type, are irresponsible and require no punishment. Difficulties, disputes, injustice, even social danger, will arise if an original moral perverseness, developed by self-indulgence, makes a man a lunatic, incapable of crime.

Moral insanity has been the bane of the code, and it will continue to be as long as experts insist that Guiteaus are irresponsible. There is such a thing as ultra-expertness, as too much specialism. It sees an uncanny light in every eye. Its psychology deserves to be written.

THE MALLEY TRIAL.

THE Malley trial, which will have closed, we presume, before this appears, has attracted a great deal of morbid interest. Two young men, no worse than society often receives; two women, no worse than the men; dissipation, adultery, and a mysterious death; these are the elements of the story.

But apart from its tragic interest or repulsiveness are some medico-legal problems of a very puzzling character.

The young woman, Jennie Cramer, was, it is claimed, seen alive and well at 11 P.M. Friday. Next morning at 5 A.M. her body was found floating near the beach. It was taken to the undertaker, and two days later a post-mortem was made. Mucous froth and a little sand were found in the trachea. The lungs were normal; there was about half a pint of reddish fluid in each pleural cavity; the stomach was healthy and contained the remnants of a meal. The other organs were normal, except that the brain was somewhat congested. Subsequent examination showed that there was in the whole body $3\frac{1}{10}$ grains of arsenic, distributed through almost all the tissues, except the bones; not quite one-sixth (.46 grain) being in the stomach and intestines.

The question is, was death produced by the arsenic or by drowning? It is a most difficult one to answer. The self-confidence of the young experts who said or swore that the arsenic killed her, is a curious illustration of the mental bias which comes from knowing too much of one thing. Dr. Beach, of this city, seemed to be the only one who really appeared to appreciate that the case was not a simple one.

There are no signs of drowning which are pathognomonic. It was perfectly possible that death might have occurred in that way. On the other hand, death might have been produced by the arsenic. But that three grains should have been given within five hours, without producing any gastro-intestinal irritation, without even causing vomiting, makes the arsenic theory a difficult one to defend. It is not at all impossible that the girl had been in the habit of using arsenic. Although the drug is usually soon eliminated, this is not always the case. And it cannot be said positively that the amount and distribution of arsenic in the body was not such as might be found in persons who are daily taking it. We repeat, therefore, here what we said some time ago, that it would be unjust and monstrous to hang a person upon the too expert evidence in favor of the arsenic theory.

THE BURNING OF THE INTERNATIONAL HYGIENIC EXHIBITION BUILDING.

THERE is very wide-spread regret at the burning last month of the building, with its contents, erected for the International Hygienic Exhibition in Berlin. A great deal of money, as well as of hard work and anxious thought, had been expended in efforts to make the exhibition a success. In a few minutes everything was destroyed. Rarely has an enterprise with so much of promise to science and human life received such a complete check.

Great efforts are making to prevent the exhibition from failing entirely. It will hardly be possible, it is said, to open the rebuilt structure this year, but it will be delayed as short a time as possible. There is plenty of pluck among the managers, and money is not deficient. The Empress of Germany has also had twenty gold medals struck off for the occasion. The trouble will be with exhibitors. These have already expended money on goods which have been destroyed by fire, constituting, in most cases, a direct loss with no compensation. It seems, however, that if confidence is secured in the still prospective exhibition, goods can easily be obtained. At least every one will now feel an additional interest in the exhibition that has been so dolefully advertised by the flames. By a little more hard work it can be made more successful than was ever anticipated.

THE DECLINE AND FALL OF THE AMERICAN MEDICAL COLLEGE ASSOCIATION.

THE American Medical College Association held its annual meeting in Cincinnati recently. It voted to rescind the resolution making a three year course obligatory upon its members.

Thus ends this once hopeful offspring of reformatory aspirations. Its body may go marching on, but its soul has melted into the infinite azure of the past—at Cincinnati. We should, perhaps, express our sorrow; but it was always a strumous boy.

So it may be as well that the association does not prolong an existence which has not for some time been a healthy one. We are truly sorry for those few concerned who really wished educational reform. But the time was not ripe. The trade in medical students calls out active competition, and demands the best business ability. One cannot sell high when his neighbor sells low. We must wait until the profession and public demand only the best goods.

It seems a little hard, to be sure, that the attempt to secure reform should be such a rapid and complete failure. Our profession has a Code of Ethics, and is presumably guided by higher than merely business instincts. But none of the many colleges in the association were willing to risk a little loss of money by advancing their standard. Yet many of these our brethren have shown great capacity for moral feeling in belaboring the New York Society.

If there could only be awakened the same tremendous zeal against the abuses of medical education, so deep-rooted and pernicious, that has been shown toward our State society, there would be true cause for congratulation.

Reviews and Notices of Books.

LEHRBUCH DER HYGIENISCHEN UNTERSUCHUNGSMETHODEN. EINE ANLEITUNG ZUR ANSTELLUNG HYGIENISCHER UNTERSUCHUNGEN UND ZUR BEGUTACHTUNG HYGIENISCHER FRAGEN FÜR AERZTE UND CHEMIKER, SANITÄTS- UND VERWALTUNGSBEAMTE, SOWIE STUDIRENDE. Von DR. MED. C. FLÜGGE, Privatdocent an der Universität Berlin. Mit 88 Abbildungen im Text, 17 Tabellen, und 4 Lithographirten Tafeln. 8vo, pp. viii., 602. Leipzig: Verlag von Veit & Comp. 1881.

Text-book of Hygienic Examinations. A Guide-Book in all Matters relating to Hygiene, for the Use of Physicians, Chemists, Sanitary and Government Officials, and Students. By DR. C. FLÜGGE, Privatdocent at the University of Berlin. With 88 Woodcuts, 17 Tables, and 4 Lithographic plates.

To those interested in questions of hygiene, this book will supply a keenly felt want. Characterized by German thoroughness, it covers the whole field of the broad subject of the methods of hygienic examinations. What was formerly scattered over an immense range of literature is here condensed and brought together in one volume, at the same time being supplemented by extensive original observations of the author. The work in its six subdivisions considers the various modes of examination for all the surroundings of man which have an influence upon his health, each chapter concluding with a critical consideration of the matters discussed. The most important and most frequently executed methods are, as far as possible, detailed in such a manner as to be understood without special knowledge of analytical chemistry on the part of the reader. Unsolved hygienic problems and disputed points are considered only when bearing upon the methods described. The antagonistic views in regard to ferments, however, are treated of at some length, on account of the great practical importance of this part of the subject.

The book, as already stated, contains six sections, viz.: I., Examinations of the Air; II., Of the Ground; III., Of Water; IV., Of Food; V., Examinations of Ferments, Micro-Organisms, and Disinfectants; VI., Examinations of the Special Surroundings of Man. In his chapter on Ozone, after considering the differential tests of this gas, which serve to distinguish it from bromine, chlorine, hydrogen peroxide, and nitrous acid, the author details the various processes for its quantitative determination. In spite of the efforts of many experimenters, he says, a satisfactory method of ozonometry has not yet been determined. The reason why faulty procedures have been so minutely described is founded on the exaggerated views held by some in regard to the hygienic significance of ozone. Such views must, of course, be based upon experimental researches involving quantitative analyses. If the latter be faulty, then these theories will, of course, lack foundation. Even if they be not altogether valueless, yet they offer no indications as to the hygienic significance of ozone. At certain meteorological stations, twenty years of observations have simply shown that the percentage of ozone is increased during the prevalence of strong winds and frequent rainfalls. In certain localities a minimum percentage occurs during November and July; in others, a minimum occurs in September, and a maximum in February. No parallelism with the prevalence of infectious epidemics can be established. Experiments upon animals demonstrate the toxic properties of the gas. It is never found in dwellings, on account of the presence of organic substances which destroy it, nor is there any proof that disease-germs have a greater affinity for ozone than other organic material found in the surroundings of man. The ozonometric papers, now in use, says the author, are to be discarded, except in so far as they are used as qualitative reagents. He hopes that meteorological stations will abandon a method which results in no gain to science, but rather serves as a stimulus to groundless speculations.

Altogether, this volume is the best of its kind which has hitherto appeared in any language. It is a work, however, that must be carefully studied before any practical benefit can be derived from it. A hasty glance at its contents will only confuse the physician in search of reliable information on matters relating to hygiene.

DIE ANWENDUNG DER ELECTRICITÄT IN DER PRAKTISCHEN MEDICIN. Von DR. B. A. ERDMANN, Königl. Sächs. Med. Rath, etc., Vierte Auflage. Mit 72 Holschnitten. Leipzig: Joh. Ambrosius Barth. The Use of Electricity in Medicine. By Dr. B. A. ERDMANN.

THE fourth edition of Dr. Erdmann's practical volume on medical electricity, although published a few years ago, is in all essential respects a modern treatise. It has this in its favor, that it is evidently written by a man thoroughly conversant with the best modes of applying the different kinds of electricity so as to produce the most satisfactory curative or palliative results. A great personal experience, extending over many years, enables Erdmann to speak with considerable authority on all empirical facts connected with the daily therapeutical use of electricity. That the author has not fallen into the common error of enthusiastic specialists in exaggerating the true value of their respective modes of treatment, is a circumstance which goes far to establish the reader's confidence in his assertions. The judicious moderation of his claims vouchsafes the author's honesty of conviction and purpose. The whole subject is dealt with in the becoming spirit of a searcher after scientific truth. At the same time, however, the fact is duly recognized that in electrology, as in numerous other matters relating to therapeutics, practical empiricism is greatly in advance of actual scientific knowledge. Accordingly, we find throughout the book the evidences of an analytical mind, which has applied itself to the solution of scientific problems, without any neglect of the practical lessons taught by every-day experience. It is this feature of the book which makes it a desirable and valuable acquisition both to the student and novice in electrology and the working practitioner. The latter will be especially pleased by the many eminently practical suggestions and valuable hints scattered through the pages of this treatise. The illustrations accompanying the text are fairly done. They are amply sufficient to elucidate certain necessary points, without converting the book into a picture gallery of instrument makers' manifold traps and contrivances.

TRANSACTIONS OF THE ILLINOIS STATE MEDICAL SOCIETY. Chicago, 1881.

THE contents of this volume are of unusual interest. The "Committee on Practical Medicine" report very fully on the diseases, and the changes in type

and treatment therein, of the last year. The article on the "Uses and Abuses of Alcohol," is an important one, as this is a subject upon which special legislation is at fault. All the communications are good, each one presenting points for consideration. The book is neat in appearance and has excellent paper and print.

REFRACTION OF THE EYE. By A. STANFORD MORTON, M.D., London.

THIS little book was prepared for the purpose of enabling practitioners to diagnose, and estimate the value of the phenomena indicating the state of a patient's refraction. It furnishes a basis for observation, in the effort to acquire proficiency in prescribing correct glasses.

THE HARROGATE WATERS. By G. OLIVER, M.D., London.

IN sketching the medical aspects of this watering-place, for the guidance of the profession in the selection of cases, the author has endeavored to provide reliable data on (1) the climate of Harrogate viewed as a health resort; (2) the mineral waters—the latest recorded views and facts as to their constitution, and their therapeutic range and powers.

A POCKET-BOOK OF PHYSICAL DIAGNOSIS FOR THE STUDENT AND PHYSICIAN. By Dr. EDWARD T. BRUEN. Philadelphia: Presley & Blakiston. 1881.

MANY able works upon physical diagnosis having been published of late years, among which may be mentioned those of Delafield, Flint, and Loomis, the *raison d'être* of the present volume is not perfectly apparent. It does not, nor could it justly lay claim to originality either of method or of matter. Its style is so rhetorical as often to be obscure. Its earlier chapters are devoted to a general discussion of the familiar methods of physical diagnosis. Diseases of the lungs and heart are subsequently treated of in detail, with special reference to their physical signs. Diseases of the abdomen are not considered.

SYMPATHETIC DISEASES OF THE EYE. By LUDWIG MAUTHNER, M.D., Vienna.

THE author, in presenting this comprehensive monograph, has two objects in view: one to compile for ophthalmic surgeons the widely diverse opinions on the subjects under discussion; the other, to enable the general practitioner and student in ophthalmology, to gain an insight into the pathology and treatment of the more important diseases of the eye.

MARRIAGE AND PARENTAGE. 12mo, pp. 170. Published by the author, M. L. HOLBROOK. 1882.

THIS little book consists essentially of a reiteration of many trite facts and statistics relating to parentage, and the transmission of traits of character as well as physical infirmities. It contains, however, many good suggestions, particularly in the chapter headed "Sanitary Parentage."

The author's very laudable ambition is to promote a gradual, healthy growth of ethical and physical power in the human race. To this end he lays great stress on the physical fitness of an alliance, but omits to consider that great factor in human happiness—sentiment.

THE SMALL FEE SYSTEM has been abandoned at the out-patient department of the Massachusetts General Hospital. In this city it is in favor still, because it brings in a considerable sum to the treasury. Whether it helps to correct abuses in medical charity is doubtful.

Reports of Societies.

AMERICAN NEUROLOGICAL ASSOCIATION.

Eighth Annual Meeting, held in New York, June 21, 22, and 23, 1882.

WEDNESDAY, JUNE 21—FIRST DAY, AFTERNOON SESSION.

THE Association met in the hall of the Academy of Medicine, and was called to order at 2.30 P.M. by the Secretary, DR. E. C. SEGUIN, of New York, who introduced the President, DR. WM. A. HAMMOND, of New York.

The President congratulated the members on the positive, unequivocal, and permanent success of the association. Nowhere in the world had neurological science been more sedulously cultivated than in this country. The measure which he especially commended was the propriety of establishing local neurological societies, which, in the end, would be feeders of this association.

After the reading of the official reports, DR. C. L. DANA, of New York, was nominated for membership.

NOMINATION AND ELECTION OF OFFICERS

being next in order, Dr. R. T. EDES, of Boston, was elected President; DR. W. J. MORTON, of New York, Vice-President; DR. E. C. SEGUIN, of New York, Secretary and Treasurer; and Drs. F. T. Miles, of Baltimore, and J. C. Shaw, of Brooklyn, Members of the Council.

The place for holding the next annual meeting was referred to the Council, with power.

An amendment to the constitution was adopted, which provides that "members removing from within the limits of the United States shall thereby become associate members, if they so desire."

The Committee on

THE HAMMOND PRIZE

of $500, offered for the best essay "On the Functions of the Optic Thalamus of Man," reported that only one essay had been submitted, which, however, did not contain any really original material, and did not advance our knowledge of the thalamus, and therefore was not entitled to the prize.

DR. HAMMOND renewed the offer for another year, and said that if at the end of that time no essay was received worthy of the prize he would give the money either to the association or to the New York Neurological Society as a nucleus for a prize fund.

The committee, Drs. Miles, of Baltimore, Jewell, of Chicago, and Seguin, of New York, was continued.

DR. R. W. AMIDON, of New York, then read a paper on

THE MYOGRAPH OF NERVE-DEGENERATION IN ANIMALS AND IN MAN.

As indicated in the title, the object of the paper was to present the results of study, by means of electric apparatus, of the effects of nerve-degeneration, the result of peripheral nerve-injury, in man as compared with animals. A myogram is a muscle-tracing; and after describing the apparatus—a simplified Marcy's instrument—by which the illustrations were obtained, Dr. Amidon directed attention to

three points: (1) The quickness of muscular contraction and relaxation; (2) the amplitude of muscular movement; and (3) the quickness of contraction after the appliction of stimuli, and the effect of continuance and withdrawal of the same.

The details of several experiments were given, and also the results of investigation of several cases of disease, "Bell's palsy of the face," etc., and some of the conclusions reached were as follows:

First.—There is an identity in the myograms as to form and relations in the human being and the frog in health.

Second.—There is great similarity in the pathological myograms.

Third.—There are marked myographic changes where slight trophic disturbances affect the muscles.

Dr. Amidon thought that when the cathode tracing was better than that given by the anode the prognosis was better that when the reverse existed.

The paper was discussed by Drs. Putnam, of Boston, and Morton, Rockwell, Seguin, and Birdsall, of New York, and closed by Dr. Amidon.

THE SYMPTOMS OF SANITY AND THE DIAGNOSIS OF INSANITY

was the title of the next paper, which was read by Dr. George M. Beard, of New York.

The object of the paper was two-fold: (1) to answer the question, How shall we know a sane man when we see him? and (2) to bring the law of evolution to bear upon the study of insanity. By investigating the normal condition of organs we obtain a knowledge of abnormal changes. A knowledge of the normal is essential to a proper study of the abnormal. The symptoms of insanity were studied under four heads:

First.—Activity of instinct of self-preservation.

Second.—Adaptation to environment.

Third.—Correspondence of character to age and station; and

Fourth.—Rememberable consciousness.

Dr. Beard had found the greatest difficulty in making a differential diagnosis between genius and insanity, as in either case the person was out of his environment.

The paper was discussed by the President.

Dr. James J. Putnam, of Boston, then read a paper, entitled

CONTRIBUTION TO THE STUDY OF CENTRAL MYELITIS,

The case reported was one placed under his observation by Dr. Shaw, of the Massachusetts General Hospital. The patient was a single woman, twenty-two years of age, who had been healthy up to the time of the present attack. A detailed clinical history was given. At the autopsy there were found numerous hemorrhages beneath the pleura pulmonalis. All the organs of the thorax and abdomen were normal. The Peyerian patches were thickened, and there was considerable ulceration of the mucous membrane of the rectum (the patient suffered from dysentery). The spinal cord was normal with reference to the membranes, but the substance was slightly softened in places. There was no meningitis (the patient suffered severely from pain referable to the back).

Microscopically the lesion was found occupying the central part of the anterior cornua throughout the entire length of the cord. There were signs of subacute inflammation in the immediate neighborhood.

The case had been interesting to him in three respects: (1) simply as a numerical addition to the cases of polio-myelitis in adults; (2) as showing the fact that a great deal of improvement may take place in symptoms while the lesion in the cord is permanent; and (3) as affording an opportunity to speak of the views recently advanced as to why this part of the cord is so often exclusively attacked.

Dr. Putnam then discussed at some length the views of Ross and others, and in continuation the subject was discussed by Drs. Miles, of Baltimore, Beard, of New York, Weber, of Boston, and Dr. Putnam.

The Association then adjourned, to meet at 8.30 P.M.

First Day, Evening Session.

Dr. Wm. A. Hammond, of New York, read a paper on

THE SO-CALLED FAMILY OR HEREDITARY FORM OF LOCOMOTOR ATAXIA.

The special point made by the author of the paper was, that neither clinically nor microscopically was there any evidence that the cases reported about twenty years ago by Friedreich, and one subsequently by Carre, as locomotor ataxia, also referred to by Erb, Leyden, Rosenthal, and Ross as cases of that disease, were illustrations of that affection.

Dr. Hammond then gave an outline of the clinical histories, and the results of autopsies so far as obtained, in Friedreich's cases, and also of the cases which had fallen under his own observation, making in all twenty-two in number. In all there were weakness of the lower extremities, gradually advancing upward, with freedom from pain; the pupils were equal, of normal size and reaction. The chief diagnostic symptoms of locomotor ataxia were absent. He regarded the cases as illustrating a distinct form of disease, probably originating in the cerebellum and medulla oblongata and extending to the spinal cord.

Dr. Seguin had met with quite a number of cases of the character referred to by the President, and he had diagnosticated disseminated sclerosis.

The President said that tremor on voluntary motion characteristic of disseminated sclerosis was absent. All his cases had originated in persons who were not of adult age.

Dr. Weber, of Boston, referred to cases in three families. With regard to tremor on voluntary motion as a symptom of disseminated sclerosis, he had seen one case, demonstrated to be such by autopsy, in which it was absent.

Dr. Seguin said that tremor on voluntary motion was frequently absent in disseminated sclerosis. He also thought that the symptoms of disseminated sclerosis should be extremely varied, because the distribution of the nodules was wholly irregular. He had also been struck by the fact that in some of these cases of so-called family ataxia there were pains, not so much in children as in adults. In the cases of children which he had seen there had been increased patellar tendon reflex.

Dr. Putnam remarked that in two of the cases referred to by Dr. Weber tendon reflex was absent in both when they were under his observation.

The paper was further discussed by Drs. Rockwell and Morton, of New York.

Dr. H. M. Bannister, of Chicago, then read a

NOTE ON BROMIDE MANIA, AND THE SUPPOSED COMPENSATORY ACTION OF EPILEPTIC ATTACKS.

The paper was a supplement to Dr. Bannister's contribution last year, on the effect which might be produced by the administration of bromides in epilepsy—namely, the development of acute mania. In only one-fifth of the cases of epilepsy which he had seen had the bromides affected the patient as indicated at that time.

Dr. Bannister discussed Stark's views concerning the effect produced by suppression of the epileptic attacks, and the paper was discussed by Drs. Spitzka, of New York, and Mills, of Philadelphia.

The next paper was read by Dr. E. C. Seguin, of New York, and entitled

A CONTRIBUTION TO THE CLINICAL STUDY OF ARSENICAL MYELITIS.

Three cases were reported in which the patients took Paris green, and the symptoms developed were such as to lead to the diagnosis of myelitis, resembling very much polio-myelitis, with some involvement of the sensory tract. The type was sub-acute in all three cases, and complete recovery took place under the use of galvanism and massage.

The President suggested that they were cases of poisoning from copper, and reported a case in which the patient had been poisoned with ammonia-sulphate of copper, and exactly similar symptoms developed. It would seem, therefore, to be more or less doubtful whether the condition was due to the arsenic or to the copper.

Dr. Wm. J. Morton, of New York, then read a paper on

MECHANICAL VIBRATION IN THE TREATMENT OF PAIN, AND A NEW PERCUTEUR.

It was discussed by Drs. Weber, Putnam, and Edes, of Boston; Miles, of Baltimore; Mills, of Philadelphia, and the President.

The Association then adjourned to meet at 2.30 P.M. Thursday.

Thursday, June 22d—Second Day.

The Secretary acknowled the receipt of communications from Dr. J. J. Mason and Dr. Schmidt, and also a note of regret from Dr. J. S. Jewell at his inability, on account of sickness, to be present.

The first communication to the Association was made by Dr. Putnam, of Boston, and consisted of the presentation of

A MICROTOME,

designed especially for making sections of the spinal cord, and also

A MODIFICATION OF POND'S SPHYGMOGRAPH,

so as to enable the operator to regulate the degree of pressnre upon the pulse.

Dr. S. G. Weber, of Boston, then read a paper on

LEAD PARALYSIS,

the object of which was merely (1) to give a brief review of the theories concerning the pathogenesis of the condition, and (2) to call attention to some unusual forms which simulate more serious disease.

After reviewing the theories, Dr. Weber concluded that lead paralysis does not depend upon a lesion in the spinal cord, but that it is primarily a neuritis, unless independent centres of lesion are to be recognized.

With reference to prognosis, it might be regarded as relatively favorable in recent cases. Dr. Weber then gave the histories of several cases, in one of which, especially, the symptoms pointed strongly toward myelitis, so that when first admitted to the hospital the diagnosis of myelitis was made. The urine was examined, in all his cases, by Prof. Wood, of Harvard, and lead was found. The lead line along the gums was absent in most of the cases. In only one was the source of the lead ascertained. The special point of interest was that lead-poisoning may almost exactly resemble myelitis.

Dr. Putnam, of Boston, referred to cases which resembled lateral sclerosis and also myelitis. Improvement took place under the use of iodide of potassium.

Dr. McBride, of New York, asked by what tests was the lead in the urine detected.

Dr. Weber did not know, but thought there could have been no doubt as to its presence, because repeated examinations were made by Prof. Wood in each case.

Dr. Seguin referred to a case of lead paralysis, in which the symptoms were apparently identical with those of polio-myelitis. It was one of those cases in which he thought it was impossible for the neurologist to make a differential diagnosis between the two diseases. There was trophic paralysis, without anæsthesia, and with pain. He believed that pain is present in many cases of polio-myelitis. He thought that lead paralysis is a form of polio-myelitis.

Dr. Weber thought that the pathology of the affection was still undecided, yet he believed the weight of evidence was in favor of its being, primarily, a neuritis. At all events the existence of lead paralysis without lesion in the spinal cord must be granted.

Dr. Miles, of Baltimore, thought that pain was absent in polio-myelitis in children, while Drs. Gibney, of New York, and Sinclair, of Philadelphia, were quite sure that children with this disease suffered from pain.

The President said that formerly he entertained the opinion that the paralysis was due to a central lesion, but he had come to believe that in the beginning the lesion was peripheral, and produced by actual contact with lead.

With reference to Dr. McBride's question, it was well-known that lead is not excreted by the kidneys under ordinary circumstances, but it appears in free quantities after the use of iodide of potassium. The best test of which he knew was the galvanic. Take a piece of bright copper, drop a drop of urine upon it, and with a little piece of sheet silver touch both the copper and the drop of urine at the same time, and if lead is present it will leave its stain upon the copper.

Dr. Edes, of Boston, doubted the introduction of lead into the system through the skin.

Dr. Charles K. Mills, of Philadelphia, then read a paper on

BRAIN TUMOR.

It contained the notes of twelve cases and they were studied chiefly with reference to diagnosis.

Headache was present in every case. The pain was continuous, sometimes of persistent severity, and always there were exacerbations of great violence.

Percussion of the skull was practised in three cases, and it intensified the pain in the region corresponding to the situation of the tumor. He believed that percussion of the skull might afford valuable aid in localizing tumors.

Vomiting was present in eight out of the twelve cases. It was absent in the cases in which the tumor was situated in the frontal region.

Vertigo, including dizziness, giddiness, reeling, insecurity in the erect posture, etc., was present in ten cases.

Mental disturbance was present in all the cases, but chiefly of an emotional character.

Anæsthesia, more or less impaired sensibility, was present in seven cases.

Choked disk existed in five cases; descending neuritis in three cases.

The temperature of the head was taken in five out of the twelve cases, and in all it was elevated. The conclusions reached were: 1, that a general diagnosis of intra-cranial tumor could be made with greater certainty than any other intracephalic disease, and the diagnosis may be based upon headache, percussion of the head, vertigo, vomiting, choked disk; 2, that a local diagnosis could be made with great positiveness from a study of the symptoms present in some cases and in others by exclusion; 3, that tumors of the cortical motor zone could be diagnosticated early; 4, that tumors of the frontal lobes could be diagnosticated by exclusion; 5, that tumors of the parietal and occipital lobes could be diagnosticated by sensory symptoms; 6, that large tumors of the pons could be localized; 7, that small growths might be localized in one of the four quarters of the pons in most cases; 8, that tumors of the cerebellum could be diagnosticated with considerable certainty.

Dr. Putnam, of Boston, thought choked disk in the early stage was only a form of neuritis, and that the distinction made between the two conditions by Dr. Mills was not real or practical.

Dr. A. D. Rockwell, of New York, referred to a case in which there were apparently positive symptoms of brain tumor, and autopsy revealed the fact that no tumor existed.

Dr. Miles, of Baltimore, thought there was difficulty in diagnosticating as to whether the symptoms were due to destructive lesion or to pressure.

Dr. Seguin recognized the importance of headache as a symptom, but in two cases under his observation there was no headache whatever.

With reference to neuritis and choked disk, it was present in only *one* of his eight or nine cases of strictly cerebral tumors; but existed in all his cases of basal or cerebellar tumors. He thought it was not well to reject brain tumor when symptoms of tumor were present, although choked disk was absent.

Several of his patients with brain tumor had exhibited an undue susceptibility to chloral, and he was obliged to use morphine to secure rest and relief from pain. The paper was further discussed by Drs. Amidon and Birdsall.

Dr. Mills, in closing the discussion, thought his cases decisive as to the difference between choked disk and true descending neuritis. Of course it was a mooted point, but his own opinion was that in cases of brain tumor there was, according to the position and character of the growth, either choked disk from mechanical causes, or descending neuritis or peri-neuritis by continuous process from the seat of the lesion. He was inclined to favor the lymph-space theory in explanation of choked disk. Dr. Putnam's idea that choked disk and neuritis are practically the same was true so far as successive steps were concerned, but Dr. Mills believed that the initial step was mechanical and not inflammatory. He was unable to explain why choked disk was absent in so many of Dr. Seguin's cases, and so uniformly present in his own.

With reference to general symptoms, intracranial tumors were, in most of the cases he had seen, tumors of the membranes of the brain. Headache is a symptom of irritation of the membranes, and its occasional absence might be due to the fact that the tumor was not situated in the membranes.

Dr. A. D. Rockwell, of New York, then reported

A CASE OF POST-PARALYTIC CHOREA, WITH REMARKS ON THE TREATMENT OF CHOREIC SYMPTOMS IN GENERAL.

The case was treated by the use of ether spray to the spine, the internal administration of the fluid extract of conium, and the application of central galvanism. He regarded the ether spray as of but little value; had much more confidence in conium, but could not speak of it in very positive terms; regarded faradization and central galvanism as most beneficial agents.

Dr. Morton, of New York, thought that ordinary cases of chorea would get well under any severe treatment; but he did not think they would get well of themselves. He had used a jet of cold water directed against the spine, and with good results, a plan much adopted upon the continent.

Dr. Edes thought that conium must be given in doses of sufficient size to produce its physiological effects in order to be beneficial. He was satisfied with the arsenic treatment.

Dr. Seguin and The President were satisfied with the arsenic treatment.

Dr. Græme M. Hammond reported

A CASE OF ATHETOSIS RELIEVED BY NERVE-STRETCHING.

Athetosis is universally regarded as an incurable disease. The first attempt to relieve these patients by nerve-stretching was made by Dr. W. J. Morton. Dr. Hammond's case was the second, and the patient was the original, published by Dr. W. A. Hammond in his treatise on "Diseases of the Nervous System." On May 27, 1882, assisted by Dr. Osborn, he stretched the median nerve, applying only a very mild degree of force. The result had been that the patient (patient exhibited) could open and shut his hand at will, take off his coat, write his name and address, things which he had been unable to do during the last twenty-three years. The hand and arm were also quiet during the night, as also was the leg, and only two epileptic seizures had occurred since the operation. Dr. Hammond believed that the lesion of the affection was situated in the corpus striatum, and that the benefit which followed nerve-stretching was due to the fact that the nerve was thereby rendered incapable of transmitting impressions fully.

The paper was discussed by Dr. W. J. Morton and the President.

The Association then adjourned, to meet Friday, at 2.30 P.M.

Friday, June 23d—Third Day, Afternoon Session.

The Council recommended the election of Dr. Charles L. Dana, of New York, as an active member, and Auguste Ollivier, of Paris, and Merzejewski, as associate members. Adopted.

The first paper was read by Dr. V. P. Gibney, of New York, and contained the report of

A CASE OF POLIO-MYELITIS, ALSO TWO CASES OF COMPRESSION OF THE SPINAL CORD BY THE ODONTOID PROCESS.

After giving the clinical history of the case of polio-myelitis (infantile spinal paralysis), Dr. Gibney described the lesions found in the cord as illustrated by microscopic preparations prepared with the assistance of Dr. R. W. Amidon. Sections were made from the brachial enlargement and the lumbar region. In the brachial region they showed macroscopically considerable shrinkage of the left anterior cornu, and microscopically there were found remaining only one or two ganglion cells; but upon the opposite side there were cells in abundance. In the sections from the lumbar region there was a notable diminution of ganglion cells in both anterior cornua, while in the cervical region there was quite marked changes in the columns of Türck.

The first case of compression of the spinal cord by the odontoid process had already been reported by Dr. Yale at the New York Surgical Society. [See Medical Record, vol. xviii., p. 555, in illustration of disease of the upper cervical vertebræ.]

The second case was one in which the compression was of four months duration. The principal changes found in the cord at the point of compression involved those parts of the white matter in the lateral columns which are next to the posterior cornua, extending out into the parts which represent the true cervical pyramidal fibres. The sections above the point of pressure showed less change. They were unable to trace any true degeneration.

Dr. W. J. Morton, of New York, referred to a specimen, which Professor Darling found in the dissecting-room at the University Medical College, and in which there had been fracture of the odontoid process. The patient must have survived the injury for some time, because the fragments had become firmly united.

Dr. William A. Hammond then read a paper on

THE DISEASE OF THE SCYTHIANS, MORBUS FEMINARUM, AND ANALOGOUS CONDITIONS.

The first mention made of it was by Herodotus, and the next by Hippocrates, who said that among the Scythians many impotent persons were encountered with high-pitched tone of voice, appearances and habits of women, etc., the tradition being that the condition was produced by God, but which the Father of Medicine believed was no more of divine origin than any other disease.

He attributed it indirectly to horseback riding and directly to division of veins near the ears which were supposed to be in close relation with the genital organs, the result being atrophy.

Dr. Hammond reviewed the history of the subject and was led to the conclusion that there was good reason for believing that among the male Scythians and the Tartars there were many who were the subjects of sexual impotence, which caused them to look like women and acquire the instincts of the female sex.

Thirty years ago, when stationed in Mexico as a member of the medical corps of the United States Army, his attention was directed to this subject, and by the personal favor of the chief of one of the tribes whom he had treated for rheumatism, he was permitted to see and examine one of these persons who, it was said, had been changed from a man into a woman. There was an extraordinary development of the mammary glands and the person had nursed several children whose mothers had died. There was no hair upon the pubes; the penis was shrunken so that the glans was no larger than a thimble and of about the same shape, the length about an inch and a half, the scrotum long and pendulous and it contained the remnants of two testicles not larger than filberts. The man was thirty-five years of age, and the evidence seemed unquestionable that when a man, his genitals were much above the average size. There was no deformity of any kind. The man was dressed in woman's clothing, was following the occupation of women at the time, that of grinding grain.

A second person was seen subsequently, thirty-six or thirty-seven years of age, and he found the same physical condition, except that there was no remarkable development of the mammary glands.

After a time he succeeded in learning that such persons were regarded as essential in the orgies and pæderastia of the tribes and that they were produced in the following manner: One was selected who had the greatest virility and attouchement practised upon him several times daily, also subjected to horseback riding severely, and finally orgasm becomes impossible, the genitals shrink and the man gradually changes into a woman.

The essential point in these cases was the mental alienation that had its origin in sexual impotence, produced by excessive masturbation and horseback riding.

The case of Lord Cornbury, one of the early Governors of New York and New Jersey, was cited, and other instances during the discussion, where men had an apparently uncontrollable desire to appear in the dress of woman.

HEMORRHAGE INTO THE PONS—PATIENT SURVIVED ELEVEN MONTHS AFTER THE ATTACK.

Dr. F. T. Miles, of Baltimore, reported a case. The patient was a woman, forty years of age, who was suddenly paralyzed, in June, 1881. There was unconsciousness. hemiplegia, pannus of the left eye, total deafness in the left ear.

The remarkable points in the case were that the abducens escaped, that there was paralysis of sensation confined entirely to one branch of the fifth pair, with destruction of the eye beginning almost immediately, and the position of the hemorrhage was quite out of range of the pyramidal tracts to account for the right hemiplegia which existed to the last.

Dr. Spitzka thought the pyramidal tracts were involved.

Dr. C. L. Dana, of New York, read a paper on

STRETCHING THE SPINAL CORD.

It will be published in full in a subsequent number.

Dr. W. J. Morton referred to a case in which subcutaneous stretching of the sciatic nerve was followed by benefit.

Dr. Edes asked as to the minimum force required to pull the sciatic nerve out.

Dr. Græme M. Hammond asked whether Dr. Dana in his experiments applied the extending force so as to make traction in the direction of the spinal cord, or was it exerted in the middle of the nerve so as to be as much one way as another.

The President thought that the spinal was stretched when the sciatic nerve was stretched by the cutting operation, and he was positive that he

had stretched it by subcutaneous stretching of the sciatic nerve. So far as experience extended, subcutaneous stretching of the sciatic nerve was not painful, and it was also impossible to stretch it subcutaneously in corpulent persons, because of the inability to bring the thigh in sufficiently close contact with the chest.

Dr. Dana said he was very sceptical concerning stretching the spinal cord by stretching the sciatic nerve subcutaneously in the living subject. So far as he had been able to ascertain, the minimum amount of force required to pull the sciatic nerve out by the roots was 130 pounds. With regard to measuring the amount of force really used, as suggested by Dr. Græme Hammond, it was a very important question, for by raising upon the nerve with ten pounds was really pulling upon the nerve in the direction of the cord not more than five pounds.

Dr. Morton thought there should be no doubt as to the efficacy of subcutaneous nerve-stretching in sciatica. Probably the nerve was more easily stretched in disease than in health. He suggested that the sciatic nerve of a fat man could be stretched subcutaneously by carrying the leg somewhat outward alongside of the body partially toward the shoulder.

Dr. Dana thought it a mistake to suppose that by subcutaneous stretching of the sciatic nerve we affect the spinal cord. In all cases of subcutaneous stretching the patients get up and walk away; whereas when the nerve is exposed and pulled upon there is some impairment of locomotion. Perhaps the nerve was stretched, but he doubted if the spinal cord was very frequently by this method.

POSTERO-LATERAL DEGENERATION.

Dr. R. T. Edes, of Boston, reported a number of cases in which severe concussion seemed to be the cause of the above lesion. Microscopic slides accompanied the communication.

Dr. Edes also exhibited a *percussor*, devised by one of the members of his hospital staff, which he had found very useful in testing the tendon reflex in the upper extremities and parts of the body. He thought that with some practice tendon reflexes could be counterfeited very well.

The Association then adjourned to meet at 8.30 P.M.

THIRD DAY, EVENING SESSION.

Dr. William J. Morton, of New York, read a paper entitled

NOTES ON THE PROGRESS IN STATIC ELECTRO-THERAPEUTICS DURING THE LAST YEAR.

A *résumé* was given of the improvements in instruments and their accessories that had been made, and a somewhat extended reference made to the diseases in which he had obtained results sufficiently good to be worthy of note.

In general he had found it serviceable in paralyses where other forms of electricity had either failed or ceased to act, in neuralgias, spinal irritation, rheumatism, and hysteria in all its forms.

He had employed it with marked benefit in anæsthesia, hemiplegic or hysteric, in neuritis, progressive muscular atrophy, angina pectoris, hysterical aphonia, spasmodic asthma, Bell's paralysis, diphtheritic paralysis, etc. In chorea the results had been unsatisfactory, and in locomotor ataxia, relief for some of the symptoms had been given, but no permanent results had been obtained.

Dr. R. W. Amidon, of New York, thought that static electricity possessed no special advantage over the dynamic, except as a counter-irritant and a slight tonic or stimulant, perhaps, in some cases, and as an excitor of the imagination. It was doubtless a useful method of treatment where the influence of the imagination was of advantage as in hysteria, but the same results could be obtained by the use of magnets, mustard plasters, etc.

Dr. Græme M. Hammond referred to four cases of progressive muscular atrophy which had improved to a remarkable extent under the use of static electricity. Under faradism, only slight muscular contractions could be obtained, but static electricity produced full contractions.

The Secretary presented

MICRO-PHOTOGRAPHS OF CERTAIN PORTIONS OF THE BRAIN OF THE IGUANA TUBERCULATA,

accompanied by a letter from Dr. J. J. Mason, of Newport, R. I.

Dr. Birdsall, of New York, then read a note on

THE SLEEPING DISEASE OF AFRICA.

The communication contained a description of this affection as seen among the negroes on the west coast of Africa, sent to him by Dr. G. H. Bachelder, together with a synopsis of the literature of the subject so far as he had been able to review it. The essential feature of the disease is an irresistible tendency to sleep, which continues for a varying length of time, average two months, and terminates fatally. The appetite remains undisturbed. According to Guerin, who had seen 125 cases and made 32 autopsies, it is a disease which has various causes, but peculiar to the African race, and produces passive congestion of the brain and its membranes. Clark directs special attention to the enlargement of the deep seated cervical glands, and another writer says that the native physicians remove the glands so affected, and that in that manner a cure is always affected. Dr. Bachelder speaks of an initial lesion in the nasal mucous membrane.

Dr. Seguin referred to a case occurring in a negro in New York, in which there was an unmistakable tendency to sleep, and there was no apparent disease about the man. He did not know the result.

The paper was further discussed by Drs. Morton and Birdsall.

Dr. E. C. Seguin, of New York, then reported

A CASE OF VERTEBRAL CANCER WITH PARAPLEGIA.

The patient had had cancer of the breast, which was removed, recurred, and a second operation was performed. Subsequently she suffered from an exceedingly painful paraplegia, and a tumor developed in the lower lumbar region. The bones viewed externally after death seemed nearly normal. On section, a projection was found within the canal in the eighth or ninth dorsal vertebræ, which compressed the cord. There were masses of cancer in the bodies of the vertebræ; one in the eleventh dorsal, smaller ones in others, a large mass in one of the lumbar vertebræ. There was no cancer of the dura mater. The cord itself was the seat of a high grade of myelitis. There was no evidence of descending degeneration. The cancer was of the ordinary variety with a large amount of fibrous tissue.

A paper by Dr. Schmidt, of New Orleans, accom-

panied by illustrations and microscopic sections, was read by title:

TUMOR IN THE FOURTH VENTRICLE UNACCOMPANIED BY SPECIAL NERVOUS SYMPTOMS.

THE PRESIDENT thanked the members for their uniform courtesy, wished them all a safe return to their homes, and declared the Association adjourned, to meet on the third Tuesday in June, 1883.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS.

Stated Meeting, May 25, 1882.

DR. H. C. CRAMPTON, PRESIDENT, IN THE CHAIR.

DESCRIPTION OF OPERATIONS FOR RESTORING THE FEMALE PERINEUM AFTER LACERATION THROUGH THE SPHINCTER ANI, AND THE SUBSEQUENT MANAGEMENT WITHOUT CONSTIPATING THE BOWELS.

DR. H. T. HANKS, M.D., read a paper on the above subject (*vide* page 1).

DR. A. C. POST being called upon to open the discussion, would only say a word regarding the needle called Peaslee's. It had been introduced by Dr. Alexander H. Stevens, and he had had one in his possession long before Dr. Peaslee. He did not know whether it was original with Dr. Stevens.

DR. I. E. TAYLOR said he had ceased to operate much during the last few years, but he was surprised to hear of so frequent failures in the operation on the part of those mentioned by Dr. Hanks. He did not know of a more simple and efficient method of performing this operation than that resorted to by James L. Lane, of London, and which he, Dr. Taylor, probably as the first one in this country, had adopted. The finger was passed up the rectum, such cutting done as was necessary, a needle (Buck's was the one he employed) was passed through the tissues above, and a very fine silver wire suture drawn through; then below three or more times, as might be necessary; the wires were twisted, and the parts let alone ten days or less, according to circumstances, and afterward the lacerated perineum was treated, or this might be done at once if the laceration had not extended into the rectum. The parts were denuded a little higher up than Dr. Hanks had mentioned, and brought together by clamps. He preferred lead ones. He seldom resorted to opium to produce constipation. Sometimes he injected a little water. He believed this method of operating was generally attended with success.

DR. CHARLES C. LEE had heard but the latter part of the paper. He had had both the fortune and the misfortune to operate in a number of cases of laceration through the sphincter into the rectum; misfortune, because in a number of cases the operation was a failure, and he believed this was justly attributable, as Dr. Hanks had said, to locking up the bowels a sufficient length of time for the formation of large scybala which destroyed the results of the operation at the time of the first movement. In all but one case, in which erysipelas broke out before this time, he believed his failures were due to the above cause. It was very necessary to twist the sutures passed through the rectal tissue very lightly, for these tissues were friable and liable to be torn through, if the sutures were twisted tight. He was in the habit of examining the parts carefully on the eighth day, and, if proper, take out the sutures, otherwise leaving them until the tenth day. While he had had a fair proportion of successes in cases in which the bowels were confined, he was satisfied the percentage would have been much greater had he kept the bowels loose, as in a number of other cases he had done. Indeed, there had not been a single failure in cases where the bowels were kept loose; and he had pursued this course in several instances. The vagina was carefully irrigated, and he saw the patient every day himself, exercising great care to have his instructions carried out fully.

DR. MUNDÉ said the operation for laceration of the perineum through the sphincter ani was a very rude one as late at least as 1860. The first person who performed the operation with a full appreciation of the anatomy of the parts implicated, was Simon. When in Heidelberg, years ago, he assisted Simon at a number of his operations for this pathological state, and he now remembered very distinctly the steps of the operation, the great care exercised, and how tedious it was, requiring from one to two hours. It was done essentially as Dr. Hanks had described. The rectal sutures were of the finest variety of Chinese silk. The bowels were not constipated, but kept loose by the compound licorice powder, or other means, having a soft movement every day, and his results were exceedingly good. He did not believe that a failure occurred while he was assisting him. Dr. Mundé, however, had never done Simon's operation, but always employed Emmet's, which was easier and more simple, and by keeping the bowels loose he had excellent results, both in the large number of cases in which the sphincter was not torn through, and in the fewer in which this and the rectum were involved. For two or three days before the operation he gave the compound licorice powder, or equal parts of powdered sulphur. of sulphate of magnesia, and of bitartrate of potash in a glass of water before breakfast, so as to render the fæces soft. On the morning of the operation he gave an enema of warm water or water and soap-suds, and another half an hour before the operation, so as to avoid the liability of a discharge at an inopportune moment. A vaginal injection was also made at the same time. The bowels were left alone two or three days after the operation, having been thoroughly cleaned out before, and, the diet being fluid, making little fæces. As soon at least as the morning of the third day he gave the compound licorice powder or the sulphur mixture, according as the one or the other was more suitable in the particular case, and when the patient was about to have a movement, an injection of sweet-oil was made, and afterward of warm water, or water and soap-suds. An evacuation was had every day subsequently, except on the day when the sutures were removed, so as to avoid possibility of damage to the fresh wound. In no operation were the services of a skilled, careful nurse more needed. She must avoid, in making vaginal injections, forcing the stream directly against the wound, or allowing scybalous masses to pass through the rectum, etc.

DR. HUNTER had operated for laceration of the perineum a number of times, making use of Emmet's method, and in the cases in which the tear extended through the sphincter the patient afterward had complete control of the fæces and gases. He attributed his success largely to passing the sutures quite deeply, and to do this he used a long straight needle, passing it half-way, withdrawing it, then reinserting and passing it through the opposite wall,

when the wire was pulled through. In vivifying the surfaces, he employed scissors of a shorter handle and greater curve than Emmet's, and having a wide surface on either side the pivot, causing close coaptation of the blades at all points.

Dr. Chamberlain had little experience with the degree of rupture of the perineum mentioned, but for lesser degrees treatment in his hands had been more satisfactory than for any other plastic operation. The point referred to by Dr. Mundé was very important, namely, to have the patient avoid any straining during the movement of the bowel, placing her on the side in a position to prevent this. A class of cases somewhat related to those mentioned this evening was where a chancroidal ulceration made a communication between the rectum and the vagina. One of the worst and most disagreeable cases of this kind he had ever seen he treated at the suggestion of Dr. Keyes, by having the patient sit in water of 90° or 100° F. eighteen hours out of the twenty-four, and for a long period. The benefit derived from it was very great, so that the patient considered herself well enough to leave the hospital without a plastic operation which he now proposed to do. The scissors he employed in repairing lacerations of the perineum were sharp only at the point, back of that being rounded. The needle was straight, and was passed as Dr. Hunter had described, but he had been unable to insert the sutures so deeply as Dr. Hunter had mentioned.

In about forty cases of laceration of the perineum in various degrees, Dr. W. G. Wylie had had scarcely a single failure, and in all the bowels were kept constantly open. He considered it of the greatest importance to pass the needle below the white fibrous tissue of the perineum, otherwise it would have no more effect than if the surfaces of the skin only were drawn together.

The President remarked that more emphasis might be placed upon the benefits to be derived from the use of hot water. In order to check hemorrhage it should be of a temperature of 120° F.

The society adjourned.

The Value of Woorara in Medicine is described, and somewhat exaggerated, by Dr. B. A. Watson (*Virginia Med. Monthly*). Its only pronounced usefulness so far has been in rabies. Dr. Watson says that a rather cursory examination of the medical literature for the last six years reveals the fact that woorara has been employed in the following diseases with the accompanying results:

	Whole Number of Cases.	Recovered.	Improved.	Not Improved.
Rabies	17	4	7	6
Tetanus	23	11	..	12
Epilepsy	80	5	..	75
Catalepsy	1	..	..	1
Chorea	2	..	2	..
Paralysis agitans	1	..	1	..

As regards the dose he suggests that, in cases of rabies or traumatic tetanus, where promptness in action may save the life of the patient, the first injection should be only one-sixteenth of a grain, *but that this dose should be doubled every half hour until its full physiological action is secured* or the patient completely relieved.

Correspondence.

MALARIAL MANIA.

To the Editor of The Medical Record.

Dear Sir: I see much is being written on this subject, and think with H. (Medical Record, October 9, 1880, p. 416), and G. M. D. (*idem*, October 30, p. 500), that something more is required than "marsh poison" to produce intermittent fever. G. M. D. hits the nail on the head when he speaks of "hot and cold nights." I would suggest the more careful study of changes in temperature in so-called malarious districts; and in this connection would invite the attention of advocates of the malarial theory to a careful perusal of Oldham's "What is Malaria?" published by H. K. Lewis, Gower Street, W. C., London and Wyman & Co., Calcutta, 1871.

I could cite case after case in corroboration of the views of Oldham; two, however, I think will suffice.

For six months I lived in the centre of a cane field in a village of about three thousand people, in a notoriously unhealthy district. The immense fields of cane were constantly supplied by running water. The heat was intense during the day, being somewhat tempered, however, by a strong southwest wind, which in the night reversed its direction and blew down from the snow-clad peaks of the Andes. The change of temperature from midday to midnight was, on an average, 40° F. I observed that those persons who remained within doors after *sunset* were never troubled with intermittent fever. A New Orleans lady, who was residing on the estate, said to me on my arrival, "Doctor, do not go out of your room after sunset and you will not get the chills, or if you are obliged to do so put on a *thick* coat." I followed her advice to the letter and never had a chill.

During the construction of the Oroya Railway, one of the most sickly sections was at an altitude of 5,280 feet, where the most ardent advocate of malaria would say that marsh poison was an absolute impossibility. There was also a rapid mountain stream fringed by willows running at the rate of about eight miles per hour in the bottom of the valley, along which were constructed the camps of the laborers. One thousand feet up on the mountain side, in hard rock or pure granitic sand, was the line of the railway. The heat during the day was intense, often as high as 110° F. in the shade, falling in the night to 60° F.! What was the result? Men working from 6 A.M. to 6 P.M., in a burning sun, almost nude, descending 1,000 feet to the bank of the river, eating their dinners, lounging about, drinking and gambling, and with that great change of temperature, intermittent fever was developed in its worst and most fatal forms; congestions of every organ, and death of frequent occurrence in six hours. I would here remark that before going to work coffee or tea, bread, and sugar were served out, the breakfast hour being 10 A.M., for which an hour and a half was usually allowed. Pure fresh water was furnished during the day *ad lib.* My own experience was this: my house was situated upon a barren rock about 2,000 feet above the river, but I was obliged to descend into the valley every night, and after being scorched all day it was deliciously cool riding down the mountain side in

the *same* clothes I wore during the day. Result, in eighteen days a violent chill.

Some will say that my system was poisoned by my previous residence in a highly malarial district. To this I answer: first, that I had passed two months at sea; second, that I had taken nearly half an ounce of quinine, besides brandy and bark. I was a firm believer in prophylactics in those days, at least as regards quinia against intermittents. My friends all advised me against such a course, saying that I would have the fever the "worse for it." I continued, and found that experience was better than theory. Quinine would not prevent, but would rather aggravate the attack. (This I have proved, at least to my satisfaction, many times.) Once the chill was on, a mercurial purge and *then* the quinine, preferably subcutaneously. My experience—and it has not been small—coincides exactly with Oldham, that malaria is chill, or at least exposure to cold.

One of your correspondents says that the insane in one of the asylums of New Jersey do not have the disease. They do not go out after sunset.

I do not believe in the bacterial theory, but do believe that there is some sort of systemic poison. At this altitude (15,000 feet) persons coming from the coast very often have severe attacks of intermittent fever, difficult of cure, and frequently terminating in typhus and typhoid, which are here *endemic*. This frequently occurs, although they may not have had, or at least deny having had, intermittent fever on the coast.

These observations should have reached you long ago but for the almost entire interruption of postal communication with the interior, owing to the war.

Yours truly, etc.,

GEO. A. WARD, M.D.

CERRO DE PASCO, PERU, April, 1882.

NERVE-STRETCHING.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Your readers may feel some interest in the following case, as nerve-stretching is now "on trial:"

Lieut. R. C——, U. S. Navy, aged thirty-five, native of Maryland. Neuralgia of the left ulnar nerve, resulting from an injury received on board the U. S. S. Wyoming, in May, 1881, while at sea. In a heavy swell he was thrown, by a sudden lurch of the ship, over the back of a chair, and fell on the deck, striking the left elbow with great force. Severe pain followed, which lasted but a few minutes, and then passed away.

On the following morning, sensation had diminished in the little finger and adjoining side of the ring finger, and there was a return of pain in the forearm. This condition continued for some weeks, when the pain became much aggravated by protracted use of the arm, in writing for some hours, upon a marble table. There were also, at this time, manifestations of malarial poisoning, to which he had previously been subject. A stay of some weeks in the country afforded no relief; on the contrary, the pain increased in intensity, extending from the shoulder the whole length of the arm, along the course of the ulnar nerve. He was then admitted into the Naval Hospital at New York, where he was treated with quinine, counter-irritation over the seat of pain, hypodermic injections of morphiæ sulph. with only temporary relief. Shortly afterward, being transferred to Washington, he came under the care of Surgeon A. A. Hoehling, U. S. N., who continued the same line of treatment, with the addition of potassium iodide, gr. v. twice daily.

The pain had now become excruciating, necessitating the constant use of morphia hypodermically, with consequent disturbance of the bodily functions. It was, therefore, determined to resort to nerve-stretching, and Surgeon-General Wales was invited to perform the operation, which was done by him August 2d. The ulnar nerve was exposed at the point of passage over the internal condyle, and was forcibly stretched, the weight of the arm being allowed to suspend from the nerve held upon the handle of the knife. The wound was closed with wire sutures and dressed antiseptically. Immediate relief from the pain followed.

In a few days it returned, and was as severe as before, so that he had to use morphine again. He then went to the Sulphur Springs, and was there seized with typho-malarial fever. Two days after the fever set in the pain left his arm, and has not returned. There is a little numbness in the fingers originally affected. He took forty grains of quinine daily for a month, he says, though it seems almost incredible; this was while he had the malarial fever. He was seen by me on March 13, 1882, and was perfectly well, excepting the slight numbness above mentioned.

Very respectfully,

P. S. WALES,
Surgeon-General U. S. Navy.

Obituary.

WILLIAM HARRISON STUDLEY, M.D.,

NEW YORK.

THE whole community of Yorkville was startled and grieved by the announcement of the death of this physician, which occurred on the morning of the 14th ult., at his residence, 160 East Fifty-third Street. A sudden attack of malignant pleuro-pneumonia, resisting all efforts of his professional brethren to control, reached a fatal termination in the brief space of three days. In his death the medical profession has lost one of its most learned, most industrious, and most successful members.

Doctor Studley was born in Bridgeport, Conn., February 21, 1827. He graduated in the class of 1850, at Trinity College, Hartford, taking the highest honor of the *Phi Beta Kappa*. In 1852 he graduated from the Berkley (Protestant Episcopal) Divinity School of the same city and was ordained to the ministry by Bishop Brownell. Zealously serving in this field for two years, in different parishes, a failure of health compelled a change of occupation. He therefore began the study of medicine in Chicago, Ills., at the Rush Medical College, and as a member of the class of 1860, received his degree from the College of Physicians and Surgeons of this city. He immediately opened an office in the then suburban village of Yorkville, in which neighborhood, with the exception of two years of professional life in the army, during the rebellion, he labored to the last. Within the last few years Dr. Studley had given much attention to gynecology, to which department he contributed many inventions and improvements of surgical instruments, as well as to its literature many essays and monographs. An extensive and lucrative practice enabled him to leave his family, a widow and four children, in comfortable circumstances.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 18, 1882, to June 24, 1882.

MAGRUDER, D. L., Major and Surgeon, Medical Director of the Department. The leave of absence granted him from Headquarters, Dept. of the Missouri, extended fifteen days. S. O. 64, Military Division of the Missouri, June 22, 1882.

HOFF, J. V. R., Capt. and Asst. Surgeon. Having reported at these Headquarters, is assigned to duty as Post-Surgeon at Alcatraz Island, California. S. O. 107, Military Division of the Pacific and Dept. of California, June 17, 1882.

NOTSON, WM. M., Major and Surgeon. Died at Columbus Barracks, Ohio, June 23, 1882.

MOFFATT, PETER, Capt. and Asst. Surgeon. Died at Fort Cœur d'Alene, Idaho, on June 15, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 24, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
June 17, 1882.	12	8	79	8	65	46	5	0
June 24, 1882.	14	8	108	9	50	73	8	0

THE LATE DR. WILLIAM H. STUDLEY.—The following resolutions were adopted by the Yorkville Medical Association, June 23, 1882:

Whereas, Our late associate, WILLIAM HARRISON STUDLEY, M. D., so recently removed to the abode of the immortals, eminently deserves a tribute to his earthly memory; therefore be it

Resolved, That as one of its founders, the Yorkville Medical Association, whose interests he promoted by many valuable written contributions, and in whose debates he was always conspicuous, deplore the loss it has sustained by his sudden taking off.

Resolved, That his record has been that of a gentleman, whose graces won him hosts of friends, whose many-sided culture commanded universal respect, and whose integrity was ever beyond suspicion.

Resolved, That we tender to his family and kindred our sympathy, with the assurance that not only this association but the community at large has lost its brightest ornament.

Resolved, That copies of these resolutions be furnished to the medical journals of the city and to the family of the deceased.

FRANCIS A. THOMAS,
JAMES R. MACGREGOR,
JOHN SHRADY,
H. A. C. ANDERSON,
WHITMAN V. WHITE,
Committee.

DR. J. G. THOMAS, of Savannah, Ga., has been in our city for a few days, having returned from the meeting of the American Medical Association at St. Paul. Those of our readers who are familiar with the history of State medicine in the United States will remember that Dr. Thomas was a few years ago sent to the Legislature of Georgia to represent the sanitary interests of Savannah, and that it was largely through his intelligence and fidelity to duty that the law was enacted which gave to that State a good health board, which at its first organization made him its president. He has been active in the affairs of the National Health Association, and called upon by the National Board of Health for co-operation in many critical junctures. Those who visited Savannah last November, to attend the session of the National Health Association, had occasion to remember with grateful appreciation his generous hospitality, to see also how faithful he was to every professional trust, and what honor he reflected upon his vocation.

AN INJUSTICE TO "THE CENTURY."—We regret that through a mistake an item, headed "A Disappointment," was made to say that *The Century* had advertised the notorious "Dr." Flower. As a matter of fact, we are told that *The Century* does not advertise patent medicines at all. Our item is true, however, of *Our Continent*, and it was that journal not *The Century* which was in mind at the time.

THE ENTERPRISE OF AMERICAN DRUGGISTS.—Some few weeks ago I referred to the fact that the American drug houses, through their agencies in this country, appear to be slowly, yet none the less surely, supplanting our English drug houses. This is being done by persistent and extensive, one might almost say reckless, advertising. In the matter of pushing business, Brother Jonathan is far and away ahead of John Bull; and if John of the drug stores does not mind what he is about, he will wake up one fine morning and find that, while he has been sleeping, Jonathan has improved the occasion by securing all his best customers.—*Students' Journal.*

TO RENDER DRESSES, MUSLIN, ETC., NON-INFLAMMABLE.—

℞. Pure sulphate of ammonia...	8 parts.
Pure carbonate of ammonia..	2½ "
Boracic acid.....	3 "
Starch, dextrine, or gelatine.	2 "
Water.....	100 "

AN EXCELLENT PLAN.—The Cincinnati Academy of Medicine will give annually a gold medal to the member who contributes the most valuable paper.

THE BALTIMORE ACADEMY OF MEDICINE renews its prize of $150 for the best paper offered upon a medical subject; the subject to be chosen by the writer.

IODOFORM IN ULCER OF THE STOMACH.—Mr. J. M. Redmond, of the Mater Misericordiæ Hospital, Dublin, reports a number of cases in which iodoform seemed to be of great benefit in ulcer of the stomach. It was given in pill-form, in three-grain doses, three times a day.

M. AMÉDÉE LATOUR has resigned his position as editor of *L'Union Médicale*, a leading medical semi-weekly. Dr. Richelot is now editor. Dr. Latour has conducted the journal for thirty-five years.

THE GERMAN CONGRESS OF NATURALISTS AND PHYSICIANS will meet this year on September 17th.

HOW TO SETTLE THE CHLOROFORM QUESTION.—Give ether.

SINCE THE BEGINNING of the chloroform discussion before the French Academy of Medicine, three deaths have been reported from the use of that anæsthetic.

THE DOCTOR ON THE BICYCLE is becoming a frequent sight in England. THE RECORD made a plea for their use in this country some time ago. There are a good many regions where they could be used to advantage.

STRETCHING THE OPTIC NERVES.—M. Parnard, of Paris, stretched both optic nerves for atrophy accompanied with vertigo and intense pain. The right nerve was pulled so hard that it broke. The patient experienced some benefit, but died a month later "from a fit of coughing."

MR. LAWSON TAIT has declared for anti-vivisection and written an essay for his side. Mr. Tait has always appeared, from this side of the Atlantic, to like to do things a little differently from any one else.

THE DEATH-RATE OF MEMPHIS.—The new sewage system at Memphis is said by Colonel Waring to be a complete engineering success. But it has not been possible to apply it to the whole city. The city is much improved, but is still in danger from some insufficiently drained places.

CHICAGO BRUNETTES.—It is rumored that the dark complexion of the Chicago ladies is due to the wide use of nitrate of silver by a popular gynecologist.—*Peoria Medical Monthly.*

TYPHOID FEVER AND TUBERCULAR MENINGITIS.—A differential diagnosis may be made between typhoid fever and tubercular meningitis, by adding nitric acid carefully along the side of a test-tube containing urine. In the former case, several strata are formed, the lowest; a blue ring of indican superposed by a layer of albumen. In the latter, urohæmatin is shown.

INTERMITTENT CHILLS of supposed malarial origin are often due to stricture of the urethra.

IODIDE OF STARCH is an efficient and harmless antidote for most poisons.

COMEDONES are sometimes curable by the application of kaolin four pints, glycerine three pints, and acetic acid two pints. Lemon-juice and acid hydrochlor. dil. are also useful.

SIR ERASMUS WILSON has been suffering for some time from intestinal and bronchial troubles. He is now improving.

OPIUM AND BELLADONNA.—At the late International Medical Congress, Dr. Dujardin-Beaumetz, of Paris, said that since the remarkable experiments performed in England (Dr. Harley's), the doctrine that opium and belladonna were antagonistic, had been abandoned in France.

LARYNGEAL ANÆSTHESIA can easily be produced, according to Rossbach, by injections of half a grain of morphine near the cornua of the hyoid bone, where the superior laryngeal nerve enters the larynx. Ice or ether spray applied here also tend to make the larynx insensible. The utility of this fact in the treatment of spasmodic troubles of the larynx is apparent.

DENTAL TUMOR OF LOWER JAW.—Dr. C. E. Nelson, of this city, reports (*Canada Medical Record*) the case of a girl, aged fifteen, who was suffering from a large tumor of the lower jaw, which had been steadily growing for six months. A prominent surgeon diagnosed the case as syphilitic, and urged its removal at once. Dr. G. P. Miles, dental surgeon, saw the jaw and was convinced that the tumor was caused by several of the second teeth, which had not yet been evolved. Passage of a probe proved this to be the case. The cavity was found and opened, and the patient soon recovered.

DR. A. N. BELL, of New York, the esteemed editor of the *Sanitarian*, republishes in that journal the essay for which he received the Merritt H. Cash prize, in 1864, on "Vaccination."

SUBCUTANEOUS USE OF THE SILVER SALTS.—According to the experiments of Reimer, and late of Jacobi, nitrate of silver, when given as usual in pill form, is decomposed, and does but pass into the blood. It is chemically inactive.

Professor Eulenburg has recently tried the effect of giving certain of the silver salts hypodermically. Silver pyrophosphate is soluble in 3.85 parts of phosphoric acid to 100 parts of water. From ʒ ss. to ʒ jss. of this was injected into rabbits. Some of it produced a local discoloration, but a part passed directly into the blood, and was detected there and in the urine.

This solution and also an albuminate of silver (argent-oxide united with albumen so as to make a solution equal to one per cent. of nitrate of silver) were given subcutaneously to various patients. The dose of the albuminate solution was ½ to 1 c.ctm.

ULTRA-QUININE—A NEW ALKALOID FROM CINCHONA.—This base has recently been separated by W. Geo. Whiffen, and receives its name from its action on polarized light, which it rotates to the left more powerfully than does the sulphate of quinia. There has, as yet, been no attempt to locate it therapeutically. It was obtained from a variety of the bark known as *cinchona cuprea*, and only in small quantities, from one to eight per cent.

CHARCOT'S METHOD OF GIVING BROMIDES IN EPILEPSY.—Charcot begins by giving 3 grains of potas. brom. daily for a week; then 4 grains, 5 grains, and 6 grains, each given daily for a week. This dose must be kept up for four weeks. Then the first dose of three grains is returned to. Such a gradual change in dosage lessens, it is said, the bromide-exanthem and the muscular weakness.

THE FIRST APPEARANCE OF YELLOW FEVER.—The first case of yellow fever this season has recently been found in New Orleans. Its history is instructive. The patient, a young English sailor, had been in Havana a few days. He then shipped on the British steamer, Marco Aurelio, a new iron vessel in excellent sanitary condition, which had gone to Havana simply to discharge a load of cattle, and had not touched shore or shipped a handful of soil. This steamer arrived at New Orleans Quarantine June 14th, and remained there the prescribed time. She was carefully fumigated and every one on board was pronounced healthy. June 21st the Englishman shipped on a Liverpool vessel, slept on it one night, next day was taken sick and June 25th died, of yellow fever.

The case is somewhat similar to one that reached the Presbyterian Hospital, in this city, three summers ago. The only comfortable way to explain them is to suppose they are not really cases of yellow fever.

Original Lectures.

ACUTE SYPHILIS.

A Clinical Lecture

By FESSENDEN N. OTIS, M.D.,

PROFESSOR OF GENITO-URINARY DISEASES, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

Gentlemen: This man presents the characteristic developments of acute syphilis, and affords us an excellent opportunity to study its leading features. The initial lesion is said to have occurred four months ago, and one month after the suspicious connection. It healed in a couple of weeks. During its presence he says it looked like a simple sore, but there is still here a little knot of induration, indicating the character as well as the locality of the lesion. We find also well-marked enlargement of the lymphatic glands of the groins, and particularly below Poupart's ligament, on both sides, which latter is quite unusual. You also observe very plainly an eruption on the forehead. It is papular in character, and is characteristic of the secondary eruption of syphilis, the first eruption being a roseola, which usually comes on at a period varying from six weeks to two months after the appearance of the initial lesion. Then, after another interval of about the same length of time, we get the second eruption, which is papular in character, the first—the roseola—being macular, and occasionally slightly elevated. The second eruption has been described by authors as of a raw-ham color, or a coppery hue. It is rosy in color when it first makes its appearance, but grows darker and darker, until finally the papule passes away, leaving a distinct reddish or copper-colored stain. You will observe in this patient that the eruption is very prominent and wide-spread over the back. Some of the papules are surrounded by a little exfoliated epidermis, which is known as the "collarette of Biett," and is considered characteristic by some writers. It is simply an exfoliation of the epidermis of the surface of this papule, seen most distinctly at its base, and is dependent upon modified nutrition, caused by infiltration of the papules with cells. These interfere with the vascular supply of the part, and we get the exfoliation here exactly in the same way that we get it at the point of initial lesion—from accumulation and concentration of cells in that locality. When this exfoliation is present on a papule, it affords an additional proof of the syphilitic character of the trouble. You will, however, see cases of psoriasis where the scales have been brushed off, which so nearly simulate the syphilitic papular eruption that it is impossible to distinguish between them; and without any other aid we are often obliged to wait further developments in order to make the diagnosis. Fortunately, however, for the diagnosis, but unfortunately for the patient, we nearly always have, at the time of the occurrence of this papular eruption, other lesions which aid us in making the diagnosis. The glandular enlargements in the groins, of the neck and also in the epitrochlean spaces—sometimes one, sometimes all—ought to be well marked by this time. You will observe here on the neck, a gland which can be seen at quite a distance—it is so much enlarged. There is a group of enlarged and indurated glands just behind the sterno-cleido-mastoid muscle, and another further back on either side. Here in the right epitrochlean space there is an enlarged gland about the size of a large pea, and what I do not remember to have ever found before, viz., another gland about two inches higher up, only a trifle smaller than the first. Quite often the epitrochlean gland, instead of being in the little space above the internal condyle of the humerus, is found an inch or two or three inches higher up, between the borders of the biceps and the triceps; but a supernumerary gland, as in the present instance, is very rare. By this time also papules occur in the mucous membrane, and these are especially characteristic, there being nothing else which resembles them, unless possibly in psoriasis. When syphilitic papules occur in mucous membrane, they usually soon become eroded and covered with a diphtheritic pellicle, to greater or less extent.

Mucous patches—really papules—in the mouth are characteristic of syphilis in its acute stage, and are present in a marked degree in this case. The mouth and the tongue are literally covered with them to an extent which you rarely see. These papules, which appear on the tongue, throat, and mouth, are superficial, and so flat that they are scarcely if at all raised above the surrounding surface or spread over an area varying from the size of a pea to that of half a dollar or larger, having often a gray or pearl colored diphtheritic edge which occasionally festoons the edge of the soft palate, forming a very characteristic and unmistakable mark of syphilis. Some time ago I was called to see a man who was supposed to be suffering from diphtheria. I found him surrounded by his family who were in great solicitude about him. On looking into his throat I saw this characteristic festooning of the palate, and did not hesitate a moment in making up my mind that the trouble was syphilitic. Soon having an opportunity to speak to the young man alone I discovered that he had syphilis, although he had not before been aware of it. The mucous patch is also liable to occur between the toes or any place where there is habitual moisture. Just at the verge of the anus is a favorite seat for it; and knowing this fact, examination of this locality will often help you out in the diagnosis of an obscure case. The mucous papule from its prominence when on the skin or semi-mucous membrane about the anus is usually called a mucous tubercle, and is quite characteristic in this patient, as you see.

You should bear in mind that the secretions of all lesions during this stage of the disease are inoculable, and one suffering from it may communicate the disease from the secretion of any open lesion upon his body or on the mucous membranes. You will understand, therefore, the importance of warning the patient having such lesion of the danger of communicating the disease to others by contact. A pencil, a pipe, a spoon, a knife or other article introduced into the mouth where mucous patches are present, some of this secretion contained in the saliva drying upon it, and afterward coming in contact with an abrasion of the lips of another person, will communicate syphilis to that person as positively and certainly as would a syphilitic venereal connection. From this you may see that syphilis is not necessarily a venereal disease, but any one exposed in the ways above referred to is liable to receive it, in which event it will follow the same course as if acquired by venereal connection. The great security which we all have against the accidental acquirement of syphilis is, that it requires an artificial port of entrance—a fracture of the skin or of the mucous membrane for its inoculation. Otherwise, sooner or later, we

should all be likely to have it, for we could not come in contact with people who have syphilis without danger of getting it at every turn. But, fortunately, it requires an abrasion for its entry, it is rarely through the ordinary affectionate relations between children and parents, brother and sisters that communication of the disease takes place. If, however, an abrasion exist upon the lips of both parties, the disease may be communicated from the one to the other by a kiss. I have often known this to occur in the venereal kiss, but never by the ordinary kiss of courtesy and family affection. But the liability to communicate the poison to an innocent person should be borne in mind by every one passing through the acute stage of syphilis. We must also bear in mind the fact that the disease may be transferred from a syphilitic to an innocent person by the physician, by the use of the spatula, carelessly laying it down after examining a syphilitic mouth, allowing the secretions to dry upon it, then introducing it into the mouth of another patient before properly cleansing it. This is especially liable to occur if the second patient be a child, as by its restlessness during the examination a lesion of the mucous membrane of the mouth may be made by the instrument. All instruments in use about the mouth, throat, or teeth should be carefully cleansed and passed through the flame of an alcohol lamp immediately after use, and certainly before use upon another person, because syphilitic lesions may be present, although unrecognized. Several well-authenticated cases have come under my observation where syphilis has been contracted in the mouth from lack of proper care in this regard. Mucous papules are very often present in the vagina or on the os uteri of females suffering with acute syphilis. In the *Independent Practitioner*, for March of this year, may be found a report of no less than eight cases of syphilis of the finger, in medical men, acquired through vaginal examinations or attendance on syphilitic women during childbirth; and since sending in that report I have seen two similar cases, occurring in the resident medical staff of one of the hospitals of this city. All of these cases were followed by constitutional evidences of syphilis. It is scarcely necessary to say that the early recognition and local treatment of mucous papules, patches, or tubercles, is one of the important duties attaching to the management of acute syphilis. Another characteristic lesion of the disease consists in the presence of scabs in the hair, as seen in this patient. The discovery of scabs in this locality sometimes enables us to make a positive diagnosis, when otherwise we would be in doubt. Falling of the hair, or alopecia, is one of the common, though not constant, concomitants of this stage of the disease, and it is readily accounted for on the same principle that explains the exfoliation of the epidermis in the syphilitic papules. The crowding of newly formed cells in the vicinity of the hair-bulbs interferes with their nutrition. It is not at all unusual for a patient to lose his hair completely, including his eyebrows and whiskers, but this baldness is not permanent, since on proper treatment, directed to the removal of this superfluous cell material, the hair is renewed. We find that any or all of the foregoing lesions of syphilis may be absent and the patient yet go through a disease which shall be recognized as syphilis. In other words, this disease varies in its intensity as much as any other, and except the enlargement of the lymphatic glands none of the conditions which you see in this patient are necessarily essential to the progress of syphilis. This is a very marked case, one in which we find present more than the usual number of characteristic lesions or manifestations.

The treatment of this, as well as all cases of syphilis during the acute stage, will be addressed to the removal of the material which is causing the trouble, that is, to the superfluous cell-growth or accumulation, the same material that we find in the initial lesion, and the same as that which we find embarrassing and enlarging the gland structure, the same as in the papule, the same as in the mucous patch, and the same as in the papules which form the scabs which occur in the hair. These lesions are all brought about and kept up by one and a single condition, namely, that resulting from an abnormal local proliferation and accumulation of germinal cells. This fact has been substantiated by repeated microscopical examinations of all lesions of acute syphilis. Consequently, the cause of all the several conditions or lesions of active syphilis being the same—that is to say, an accumulation of this embarrassing cell material—the treatment is simple, and the same for all, having simply for its object the removal of such material.

The question as to how this shall best be effected leads us to consider first the nature of the material we desire to be rid of. This has been proven beyond a question to consist of human germinal cells, in no known respect different from normal germinal cells, except that they are the product of a proliferation more rapid than that process under normal conditions. Microscopically they cannot be distinguished from the cells which are proliferated and accumulated to repair loss of normal tissue brought about by ordinary causes. Secondly, What are the means and processes by which healthy cell-material, exuded in excess of the necessities of growth and repair is removed? The answer is simply that the necessary process is a fatty metamorphosis, through which alone any living material, normal or abnormal, must pass before it can be eliminated from the living organism. The means by which it may be effected are various: 1st, pressure; 2d, innutrition; 3d, various external agents and internal remedies, which by experiment have been found efficient in producing or hastening fatty degeneration or metamorphosis of tissue.

First, in regard to pressure: The effect of pressure in producing this result is recognized in its known influence as a surgical measure in reducing and dispersing abnormal growths. This is also recognized in its tendency to spontaneous disappearance, after a time without treatment, of the cell accumulations of syphilis. The tendency of all syphilitic lesions is toward recovery. The necessary pressure exerted upon any local cell accumulation in the tissues would tend toward its removal by fatty degeneration.

Second, in regard to innutrition. Withholding of necessary food produces fatty degeneration of the tissues. The starvation cure was at one time, especially in Germany, in great repute as a cure for syphilis. The sweating cure. The long popular and much vaunted cure by cathartics, diuretics, etc., through profuse drinking of decoctions of sarsaparilla, senna, and different woods, can now be recognized as influential through their capacity to hasten fatty metamorphosis. But the remedy of greatest acknowledged value in the treatment and cure of syphilis for the past two hundred years, and up to the present day, is *mercury*, and this it is well known is also the most efficient agent in producing fatty

metamorphosis of living material. Healthy persons quickly emaciate, all kinds of tissues break down, under its continuous excessive use. In the salivation it then produces, the characteristic fœtid odor has been found due to the decomposed fat which results from the fatty degeneration it causes. In point of fact, every remedy which has ever had a substantial reputation as of value in the treatment of syphilis will be recognized *à priori* as one of greater or less power in inducing fatty metamorphosis. If then we find in syphilis, as the characteristic and essential factor of every lesion, an accumulation of superfluous cell material, sufficient in degree to embarrass the functions of the vessels or tissues implicated, we have good reason to introduce the remedy which *par excellence* is known to be potent in removing it, namely, mercury. And if we consider that this remedy is also in highest repute from a clinical standpoint, we are warranted in its administration with the expectation of the best possible results. The manner of its use, the size of the dose, its frequency, and time of continuance, only remain to be settled. Clinical experience in the administration of mercury has taught the fact, now accepted by all recent recognized authorities in matters syphilitic, that small doses of mercury continued for a very long period, say from one to three years, constitute the best treatment for the most efficient and permanent eradication of syphilis from the system of a person afflicted with that disease, and that this applies to any and every form and manifestation of it during the acute stage, which stage may be said to cover a period varying in different cases from one to three years. The hastily generated cell material which has been described as the essential element in the production of the different manifestations of syphilis lacks the healthful vitality to enter effectively into the composition of normal tissues. It is present only as obstructive material, and from its presence as such is already subjected to the mechanical influences which tend toward its dissolution. It may then be accepted as more readily affected by remedial measures calculated to induce fatty metamorphosis of living material than such material generated and developed under normal conditions. Hence, a smaller amount of mercury, for instance, would be necessary to effect its removal from the affected organism than would be required to produce a like effect on healthy tissues. Such an amount then as would cause the speediest removal of the imperfect or syphilitic material, without damaging the healthy constituents of the body, would constitute the highest ideal of an anti-syphilitic treatment. Hence, we can accept from an intelligent and philosophical standpoint the position which has heretofore been only taken from a clinical or empirical view of the matter, viz., *That small doses of mercury long continued constitute the most effective and judicious mode of treatment of syphilis during its active stage.*

Beginning then with small doses, of whatever preparation of mercury we decide to administer, in a given case, we increase the amount until we find the constitution of the patient being affected, evidenced by the presence of softness of the gums or a little red line about them. When that occurs, we know we are getting to a point of affecting the healthy structures of the body, and then the dose is reduced until just that point is reached at which the patient can be carried through without any disturbance of the bowels or of the salivary apparatus. In the case of this patient, then, we should commence by giving small doses of mercury, gradually increasing the quantity until the point of tolerance is reached, and keep it there. Any of the preparations of mercury may be given. We will begin, say, with the proto-iodide, a quarter of a grain, three times a day, for two or three days, or, lest the patient should, as is the case with some, be peculiarly sensitive to the influence of mercury, we may begin by giving only two pills a day, for two or three days, and then add a pill at a time as long as he shows no evidence of disturbance from it, and, when the highest point of tolerance is reached, continue the dose. Sometimes blue mass with iron is used, pills containing two grains of the mass hydrarg. with one grain of the exsiccated sulphate of iron—two to four daily until the desired impression is produced, and continuing, usually, about three per day throughout the desired period. In all these cases I may remark that iron is indicated because the health is usually more or less below par. Therefore, when giving the proto-iodide of mercury, I am also in the habit of giving the dialyzed iron, in doses of ten or fifteen drops, three times a day. The biniodide of mercury may be given in doses of a sixteenth of a grain, or any other of the preparations of mercury may be administered in suitable doses, the object being simply to get the gradual and positive effects of the drug. It may be administered by external means, using a small quantity of mild mercurial ointment, say the size of a filbert, rubbing it in under one knee one night, under the other knee the next morning, under the axilla the next night, and so on, using it night and morning. There have been those advocating the hypodermic use of a solution of the bichloride of mercury, but this is a method of administering it which, while I have used it, I do so no longer, and do not recommend it, finding other quite as efficient and more agreeable ways of introducing mercury into the system. Mercurial baths or fumigations may also be used for the same purpose.

Whatever be the form of mercurial you decide upon employing, your treatment should be conducted according to the principles I have mentioned for all the lesions or manifestations of the acute stage of the disease, whether it be of the skin, of the mucous membrane, or whether it be a syphilitic iritis, an inflammation of the iris (which is caused really by a papule occurring at that point, that is, an accumulation or aggregation of cells). All these conditions or manifestations of syphilis, I repeat, respond to this systematic method of mercurial treatment better than to any other. The open lesions during the acute stage of syphilis, chiefly on mucous membrane, the mucous papules, patches, and tubercles, before alluded to, in addition to constitutional measures, require prompt local treatment, especially on account of the contagious property of their secretion. Daily applications of a strong solution of nitrate of silver—forty to sixty grains to the ounce of water—or a light brushing over with the solid arg. nit. will be found most efficacious in hastening their disappearance. This also applies to ulcerations of the tonsils, which sometimes occur during this stage.

When papules are so situated as to cause annoyance by their unsightliness, as on the face or hands, ung. hyd. præcip. alb. with an equal quantity of cosmoline, or a ten per cent. solution of oleate of mercury with equal part of cosmoline may be used as a daily local application with advantage—in the latter case a few drops of one of the essential oils will render it more agreeable. The diet of the patient should be simple, excluding acids, spices, and highly

spiced food. Tobacco is particularly injurious during the course of this disease, from the fact that both smoking and chewing are liable to produce irritation of the mucous membrane, and when a mucous patch occurs in the mouth it is a very difficult thing to heal while its contact with tobacco is kept up. It is certainly a very great hardship for persons who are addicted to the use of tobacco to give it up; but it is very important that they should do so for the proper and effectual treatment of this disease. In a very interesting note, received not long since from the venerable Professor Willard Parker, in which he spoke of syphilis, I remember he very quaintly said in regard to it, "Some people believe that syphilis is incurable; that is not my belief. When a patient comes to me with syphilis I say to him, do you use tobacco or alcoholic spirits? If he says yes, I say to him, you are possessed of three devils—syphilis, rum, and tobacco; if you will exorcise two of them, R. and T., I will take care of and cure the other; but, if you will not agree with me to give assistance in this way, I will not undertake your case." I would advise you all to make a note of this and remember Dr. Parker's advice. I can assure you it fully coincides with my own opinion, particularly in regard to the "rum": and in regard to the "tobacco" also, when the mucous membrane of the mouth and throat is affected or predisposed to trouble.

The length of time usually required for the complete cure of syphilis will vary in different individuals from one to three years, and during all this time the patient should be under judicious treatment, in accordance with the principles laid down in the case just presented. The steady, gentle influence of the mercurial is required until all abnormal cell-accumulations dependent upon the syphilitic influence have disappeared. When all external evidences of the disease have passed away and the lymphatic glands can no longer be felt, or have returned to the condition in which they were found previous to the constitutional stage of the disease, the treatment may be discontinued, but not before, unless there is some idiosyncrasy in the patient which contra-indicates its use. If the patients are faithful, sensible, and obedient, in by far the largest majority of cases they will pass through the trouble easily and happily to a complete cure. A great weight of experience in the plan of treatment which I have indicated, including that of the most distinguished authorities in Europe and in America, assures us of the truth of this, and that patients do not suffer from the long-continued treatment in any appreciable way, and, further, that in consequence of it they have the greatest and the *only* security of escape from the so-called tertiary, or late lesions—the sequelæ of syphilis.

I am quite aware that there is a great popular prejudice against the use of mercury in syphilis, and this has arisen in great measure from the abuse of the drug in earlier times, but it has been kept up and intensified by quacks, and the ignorant and the unworthy of our profession, who, from causes and motives natural to these classes, refuse to accept the testimony of the learned and experienced authorities who are now in complete accord in this matter in every part of the world. Without a show of evidence or experience entitled to respect, they deny the necessity of the mercurial treatment, and make the pretence that syphilis may be as efficiently and more safely managed without it. They point to cases thus treated apparently well of the disease, and claim them as evidences of the truth of their statements. The very important fact that syphilis, in its acute period, is a self-limited disease, and will pass away with any sort of treatment, or without treatment, is not made apparent. This is the fact, and while we claim and know that a judicious mercurial treatment will hasten the cure of the active lesions and stages of syphilis, it is not on this account that the treatment is considered *essential*. It is because, more than any other known remedy, it prevents the sequelæ of syphilis—the so-called tertiary lesions—which result in destruction of important tissues and organs, vessels and bones. These accidents do not occur in the early or acute stages of syphilis. After the apparent disappearance of syphilis in a few months or a year or so, there comes a deceitful period of perfect health, perhaps. The disease is indeed cured; but in two or three, or ten, or twenty years after, new troubles may arise, no longer contagious as in the past syphilis, but destructive. It is this that causes the really important damage. Deformity, disability of body or brain, or both, and, finally, in some cases, death. It is to avoid the danger, present in every case of syphilis, of such results, that the persistent and judicious use of mercury during the acute period of the disease is most important, and is, as we fully believe and know, absolutely essential. We do not urge the administration of mercurials without a due consideration of the responsibility we take in so doing, without a knowledge of all it has ever done that is objectionable, or ever may do; it is that because without a systematic, judicious mercurial course the patient who has once been a subject of syphilis, in no matter how light a form or how slight or short-lived the manifestation, is in jeopardy every hour, and that nothing but a course of simple mercurial treatment, continued systematically for at least a year, can afford any reliable security. This is the experience of all in our profession who have any title to a respectful hearing, on account of wisdom and experience, and in the present state of our knowledge of this matter it is sufficient to warrant you in insisting upon the necessity of such a course of treatment in every case of syphilis which in the future may present to you for care and treatment.

Do not understand me to say that every case shall be treated in the same manner as to the size of the dose or the mode of administration, and without regard to the physical condition and circumstances. A judicious following of the plan insisted on is necessary—such an amount and such a mode of administration as may be borne without disturbing the digestive apparatus, or materially interfering with the processes of nutrition. As a rule, if the medicine is judiciously administered, the patient will not only not be disturbed, but he will improve in both these respects. How much a more regular and exemplary mode of life which a proper management of syphilis necessitates, has to do with the improved condition, I am not able exactly to state, but it is nevertheless a fact, that most young men are in better health after a judicious course of specific treatment for syphilis than before its acquirement.

I do not wish to be understood that no other medicines are necessary or advisable in any cases of active syphilis. There are idiosyncrasies that must be respected—cases that will not bear the ordinary amount of mercurial without trouble of some sort. These are fortunately rare, but when they present, you must use your ingenuity so to reduce and combine your most excellent remedy that it may be borne. You may alternate it with the iodide of potassium, which is also an agent of much value in bringing about fatty degeneration of living tissue,

or you may, if you can do no better, rely upon this drug in combination with other means and measures which are known to favor fatty degeneration and elimination.

You may meet with cases that will try your temper and your courage—that will call into fullest requisition all your knowledge and your experience and your judgment, and, not least, all your common sense, and yet fail to obtain such a toleration of the mercurial as will enable you to prevent the occurrence of the sequelæ of syphilis. These cases will, however, I am glad to say to you, be rare exceptions, and you may have the assurance of the rule, that such a plan of treatment as I have sketched out for you will be well borne, and will not alone aid you in carrying your patient with comparative equanimity and comfort through the acute stages of this disease, but, what is of infinitely greater importance, you will give him the greatest possible security against an occurrence of the sequelæ or manifestations of so-called chronic or tertiary syphilis.

Original Communications.

A CASE OF DIARRHŒA TUBULARIS,

With Remarks on its Diagnosis, Pathology, and Treatment.[1]

By WM. E. BRANDT, A.M., M.D.,

HANOVER, INDIANA.

Early in September of 1881 I was called to see Mrs. N——, aged thirty-eight, married but childless. She had been under the care of another physician for two weeks without relief. I found her suffering from intermittent attacks of abdominal pain of a colicky character, which lasted from thirty minutes to an hour, and recurred four to six times daily. She also had pruritus vulvæ of an aggravated type. She was of the strumous diathesis, and presented indubitable evidences of scrofula. She denied ever having had syphilis. Mrs. N—— was of the nervous temperament, and for some years past had complained of anomalous pains affecting chiefly the abdomen and back. For some months past her menstrual periods had appeared at intervals of from two to three weeks, instead of a month, as heretofore. I was informed that the first symptom of the present attack consisted of a burning pain in the vagina, accompanied by a profuse discharge resembling that of the "whites." After a thorough examination I was convinced that the vaginitis was non-specific, and that it was probable that the discharge from the vagina was due to membranous dysmenorrhœa. The pulse and temperature did not indicate any febrile movement; in fact, the skin was cool, the circulation languid, and the pulse remained almost, or slightly below, normal during the subsequent six weeks of her illness, most of which time she was confined to her bed. The tongue did not present the characteristic appearance that it usually does in inflammatory affections of the gastric intestinal mucous membrane. On the contrary, the anterior part presented an almost healthy appearance, and only the posterior portion was covered with a light silvery coat. The bowels were reported to be in a normal condition and moving once or twice a day, the stools being healthy and well-formed. The urine was scanty, high colored, and contained considerable vesical mucus, and on cooling deposited a dense lateritious deposit.

I will state, *en passant*, that my patient's husband was a victim of that rare disease which, for the want of a better name, Roubaud called aspermatism and gross dyspermatism, and that in my opinion the pruritus vulvæ was most probably due to this fact; for in coitus it took him fully half an hour to bring on an orgasm and emission. I was more easily led to entertain this belief from the fact that in 1875, when stationed at Fort D. A. Russell, I treated a case of pruritus vulvæ, with reflex gastrodynia as a sequel, which was entirely relieved by temporarily separating the patient from her aspermatic husband, and interdicting all sexual congress. Mrs. N——'s mental state was very unsatisfactory, she being quite irritable, depressed, and having frightful dreams, with mild delirium and spectral illusions, at night. During the intermissions of pain she would brighten up and grow more cheerful, but when the paroxysms recurred she would lose all hope and declare she would never recover. The restlessness would grow worse toward night, inducing insomnia irrespective of the attacks of pain. Dr. Cummings,[1] has drawn a faithful portraiture of the mental state in this disease. He says: "When the affection has been of long duration the mental irritability is very great, and, what is more painful still, the patient's feelings and views are perverted and distorted. It is unnecessary to add that they are miserable in themselves; and where the nature of the affection is unknown to and due allowance not made by their companions and friends, the cause of misery to others. They are quite sensible that they are not what they formerly were—that they are changed for the worse. They feel, moreover, that they have little control over their mental state, and are apt to fall into a condition of great depression and despondency, relieved from time to time by happier feelings, but those of comparatively short duration." After careful and repeated examinations of the stools, and not finding any membranes or excess of mucus therein, I diagnosticated the case as enteralgia due to reflex action, having its *fons et origo* in the sexual organs, and possibly aggravated by malarial influences which were rife in the vicinity at that season.

My patient had been dosed *ad nauseam* with opium, calomel, and whiskey, by her former attendant, which treatment had increased the pre-existing dyspepsia and destroyed what little appetite she had remaining. I at once placed her on milk diet with toast, gave her quiniæ and ignatiæ per os, and morphia sulph. hypodermically. The vaginitis yielded readily to treatment, but the pruritus vulvæ persisted for several weeks, despite the use of a variety of well-approved remedies that were used both locally and internally. I will say that I got better results from the use of Bulkley's chloral and camphor ointment than any thing used. I also applied to the os uteri argenti nitras, hoping that if the malady was reflex in character this treatment would allay the source of irritation as it had done in similar cases reported by Dr. Jones.[2] I also ordered the vagina to be freely douched with warm starch-water several times daily. But I was disappointed in the result of both of these procedures. I increased the dose of quiniæ, as it seemed to be doing

[1] Read before the Kentucky State Medical Society, April 7, 1882.

[1] Edinburgh Medical Gazette, 1849, p. 257.

[2] New York Medical Record, vol. xiii., 1878, p. 448.

good and controlled the seizures to a certain extent, until it produced cinchonism, but still the paroxysms returned at intervals with distressing regularity. Several weeks passed in this way, and the patient was gradually losing all she had gained during the first weeks of treatment, for almost complete anorexia followed these attacks, and little or no food was taken for several days thereafter. I therefore discontinued the quiniæ and substituted liq. potas. arsen. and liquor ferri nitratis; also gave for the nausea and vomiting, bismuth with hydrocyanic and carbolic acids, ox. cerium, etc.; in fact, I rung the changes on all the antispasmodics and astringents, etc., without any permanent relief to my patient. Her stomach and bowels became so extremely sensitive that she could not take the arsenic and iron, even in one-drop doses, without at once inducing diarrhœa with colicky pains. Whenever she had one of these severe seizures I was sent for to administer the morphia, which I always did hypodermically, and it usually required a repetition of several half-grain doses to give relief. It was after one of these attacks that I discovered in the stool portions of tubular membrane several inches in length, combined with a large amount of white gelatiniform mucus. These attacks of abdominal pain simulated exactly the pain and symptoms incident to the passage of biliary calculi, and would deceive the very elect if they did not carefully examine the discharges for membranes. The seat of the greatest pain in tubular diarrhœa is referable to a spot situated a little above the umbilicus, while in hepatic colic the pain is felt in the vicinage of the right hypochrondium, or directly over the liver. The diarrhœtic pain has a griping, burning, lancinating character, and radiates through the abdomen and thorax. The anguish is so great that the patient writhes in agony and rolls from side to side in bed, pressing the hands or a hard substance to the epigastrium, vainly seeking relief. The skin is cool and often bathed in cold sweat; the extremities are cold; excessive emesis almost always accompanies the exacerbations of pain; the pulse is weak and slow, and the temperature slightly below normal. Well-marked jaundice appeared the day after one of these severe seizures. This I ascribed to the presence of gastroduodenal catarrh. During the continuance of this intercurrent affection, the patient had conjunctivitis, with mild photophobia. The icterus, with the concomitant symptoms, after lasting about a week, subsided *pari passu* After one of these attacks the abdomen would remain very sensitive to pressure at one or more tumefied points, and the patient complained of a feeling of soreness and rawness, as if the colon had been denuded of its mucous membrane. Counter irritation over the seat of pain seemed at times to assist in allaying nausea and vomiting, but beyond this did no good, though carried to vesication. I should have stated that for the insomnia I gave chloral hydrate, potas. bromid., and hyoscyamus, but was forced to discontinue the use of all three drugs, as they seemed, especially the two first, to aggravate the dyspepsia, and thereby increase the periodical exacerbations. There was no evidence of proctitis at any period of the case, but, of course, after several loose evacuations there existed severe tenesmus, but there was no blood in the stools.

Flatulent distention of the colon was not a marked feature of the case, yet it was present occasionally. Dyspeptic symptoms were prominent from the beginning to the end of the treatment. The ejecta did not always contain well-formed tubes, but often consisted of a gelatiniform mucus, or of long, worm-like masses resembling entozoa. These discharges were usually very offensive in their character. At other times the evacuations presented a yeast-like appearance, as if they had undergone fermentation and were mixed with lienteric discharges. Dr. Haberson[1] says: "The nervous system in this disease is manifestly not in its full vigor, and the vaso-motor nerve is so sensitive in its sympathetic connections, that when the bowels are acted upon there is often a sense of great prostration produced, or even syncope. In other cases there is general depression almost amounting to melancholia, and there is inability to take active exercise or to grapple with the worry and fatigue of ordinary life. In young women I have frequently found this state of the colon associated with dysmenorrhœa and ovarian irritation. This condition of catarrh of the colon is augmented by hepatic congestion; the inferior mesenteric veins and the hæmorrhoidal veins become distended, and the morbid activity of the mucous membrane is thereby increased. Hæmorrhoids, also, becoming inflamed, transmit irritation continuously upward to the sigmoid flexure and to the colon. I have found this state in ague, in gout, and in diabetes; the habit of using tobacco to excess may also induce it. The condition I have described is widely different from the serous diarrhœa so often observed in disease of the kidney, and although it may be present as the sequel of dysenteric disease and ulceration, it may be quite independent of such changes. It is distinct also from the diarrhœa which accompanies atrophy of the mucous membrane of the small and large intestine, as well as that connected with lardaceous disease of the bowel. As far as this state is constitutional in its character it is relieved by general treatment, but it often assumes a troublesome persistency as a local catarrh."

A month had now elapsed, and my patient had grown very weak and was much emaciated, and, owing to the weakened state of her assimilating organs, was in a very critical condition. I discontinued all drugs except the morphia, which she said she could not live without; gave her ice-cold milk and lime-water, and muriatic acid with pepsin; also teaspoonful doses of old whiskey as often as required. Under this treatment her stomach gradually regained its tone, and I cautiously began the use of Fowler's solution, which, owing to the irritable condition of the stomach, I injected subcutaneously. I also gave Bland's iron pills, one three times a day, and in a week ordered comp. tinct. cinchonæ, fl. ext. serpentaria, fl. ext. colombo, equal parts, in teaspoonful doses. Under this treatment, with a carefully regulated regimen, she began again to improve. According to Leube,[2] *the selection of a suitable diet* should be regarded as probably the most important part of the treatment. All food, therefore, which is difficult of digestion, and the irritating portions of which pass undigested into the colon, such as leguminous vegetables, cheese, cabbage, stringy meat, etc., must be prohibited; so, also, but little bread should be allowed, as Voit's experiments have shown a bread diet increases the solidity of the fæces. Therefore, the best dietary for patients with this disease should consist of albuminous substances of an easily divisible character, *e.g.*, milk, eggs, mutton or beef, also food and broths containing but little

[1] London Lancet, 1868, p. 153.
[2] Ziemssen's Cyclopædia Prac. Med., vol. vii., p. 369.

starch, and the various kinds of mucilaginous substances, such as rice and barley-water, etc. Fatty food should also be interdicted, as it increases the diarrhœa, and not being absorbed, owing to the diminished power of the intestinal villi, is hurried into the colon and there undergoes decomposition.

As the patient gradually convalesced the dose of the liq. potas. arsen. was cautiously increased, but three drops was the maximum dose that could be tolerated per os.

Fowler's solution, tincture of iron, and fl. ext. ignatia was directed to be taken three times daily for three months after leaving her bed, as the disheartening paroxysms recurred several times a week during all that period; though in the intervals she was free from all pain, and enjoyed comparative health. Seven months have now elapsed since she was first attacked, and for the last three there has been no membranous discharge from the bowels, or any of the concomitant pains; the patient has regained her former health, and though the disease is prone to relapse, we indulge the hope that in the present instance it will not. While to the student of medical literature the disease under consideration is well known, yet I am convinced, from the meagre accounts given of it in our systematic text-books on practice, and in our medical journals, that it must be considered a comparatively rare disease. And, moreover, it seems strange that such a painful malady should have been so overlooked by the leaders of our profession. I was surprised in looking over my library to find no mention of the disease in any of the following classic works on the practice of medicine, to wit: Grave's, Trousseau's, Watson's, Tanner's, and Neimeyer's. Wood, Aitken, and Bristowe give meagre and unsatisfactory accounts of the disease; the latter especially fails to grasp the salient points, for he confounds this disease with dysenteric ulceration. Flint, in the earlier editions of his "Practice," overlooked this disease, and in his last edition barely touches upon it. Bartholow, in his excellent work on "Practice," under the head of "Croupous Enteritis," gives us a very graphic description of this disease. Leube, *loc. cit.*, in his monograph in Ziemssen, treats of this disease in a masterly manner. Dr. Hartshorne, in his edition of "Reynolds' System of Medicine" (vol. iii., p. 162), very briefly, but judiciously, recognizes this malady as a distinct affection. I have not been able to find any cases on record in any of our American medical journals, except those reported by Sir James Simpson in the *Boston Medical and Surgical Journal*, 1855, p. 257, and those recorded in the *American Journal of Medical Sciences* for October, 1871, p. 321; July, 1873, p. 103; and January, 1875, p. 103. They all will well repay perusal, especially the very able memoir by that gifted and veteran observer, Da Costa.

Surgeon Woodward,[1] U.S.A., has given such an admirable *résumé* of the pathology of diarrhœa tubularis that I shall quote him *in extenso:* "The disease in question is a form of diarrhœa characterized by the appearance in the stools of membranous substances, which sometimes take the form of simple or branching tubes; a disease which has attracted considerable attention, and has been described under various names, such as diarrhœa tubularis, chronic pseudomembranous gastro enteritis, follicular duodenal and colonic dyspepsia, fibrinous diarrhœa, chronic pellicular inflammation of the intestinal mucous membrane, chronic croup of the intestines, mucous disease of the colon, chronic muco colitis, mucous disease, and membranous enteritis. Of these various appellatives, tubular diarrhœa, proposed by John Mason Good,[1] not only antedates the others, but seems least objectionable as implying no theory whatever. When the membranous substances do not present any trace of tubular form, the designation membranous diarrhœa might be used with propriety. The term membranous enteritis, proposed by Da Costa, *loc. cit.*, is objectionable because it is equally applicable to diphtheritic dysentery.

"Tubular diarrhœa occurs most frequently in hysterical women or in hypochondriacal men, who, after suffering with nervous and dyspeptic troubles or other evidences of ill health for a variable period, become subject to attacks of colicky pains, sometimes accompanied by a hardness or tumefaction of some portion of the abdomen, and followed by the evacuation of the pseudomembranous substances, which come away in shreds or tubes, sometimes in considerable quantity, and usually accompanied or followed by loose feculent, watery, muco-purulent or bloody stools. The evacuation of the membranous matter is followed by relief from abdominal pain and other pressing symptoms, but very frequently this relief is only temporary and other paroxysms ensue at variable intervals. The individual attacks generally last a week or more, and the intervals between them vary from a few weeks to several months in duration. In some of the cases reported but a single paroxysm is recorded; in others the disease seems almost to have been continuous for a considerable period of time. Of the women affected, a number were suffering at the time from some uterine disorder. Clinical and microscopic examination of the membranous matter passed in tubular diarrhœa shows that it is chiefly composed of inspissated mucus, as was originally supposed by Fernelius[2] (who first described this disease). With this a fluid more or less albuminous in character is often mingled, but fibrine is seldom present in any considerable quantity. Dilute acetic acid does not dissolve the membranes or cause them to become swollen or transparent, while they freely dissolve in a solution of caustic potash. Examined with the microscope, they prove to consist of a hyaline or slightly granular matrix, which becomes fibrillated on the addition of dilute acetic acid, from the precipitation of mucine filaments. Scattered through this matrix are a variable number of cells, and of modified forms resulting from the vacuolation and partial decomposition of these elements. It will be observed that the membranes and tubes in the stools of tubular diarrhœa differ greatly even from those membranes and casts in the stools of diphtheritic dysentery, which are composed of the diphtheritic layer alone, without any portion of the necrosed mucous membrane. The former are composed of hyaline, the latter of granular fibrine. There seems to be no reason why shreds and membranes of condensed mucus should not occur in the stools of simple inflammatory dysentery in the early stages of the diphtheritic form, or mingled with other membranes and shreds in the later stages; but in point of fact, when shreds and membranes are found in dysenteric stools they usually prove to consist either of necrosed tissue or of granular

[1] Medical and Surgical History of the War, Part II., vol. i., p. 366, 1879.

[1] Study of Medicine, vol. i., p. 162. Philadelphia, 1825.
[2] Pathology, Lib. vi., Cap. 9, p. 181. Paris, 1554.

fibrine. Undigested fragments of food, as in lientery, may, in certain cases, simulate the membranous or even the tubular matters described above, but the difference can be detected at once by the microscope." Dr. Powell, of London, in 1820, reported four cases of this disease, all in women, which he termed "A Painful Affection of the Intestinal Canal."[1] The editor of the *Medico Chirurgical Review*, in commenting on these cases, cites Villermé,[2] thus: "The false membranes of the alimentary canal are perfectly similar to those formed in croup. The fragments passed by vomiting or by stool are generally soft, pulpy, and without any appearance of organization. The reagents which concrete albumen render them hard. Sometimes the flakes are considerable, and when developed in water represent entire tubes broken off irregularly at the ends, which have led to the erroneous opinion that they were portions of the mucous membranes of the intestines. I have had occasion to see great quantities of these adventitious membranes passed by stool in the colic of Madrid. They were generally of a gelatinous consistence and enveloped in mucous. One of these exhibited an exact mould of the intestine, being tubular and some inches in length."

The motive which induced me to put this case on record was to call renewed attention to this interesting and painful disease, which, for reasons adduced, probably occurs in practice more frequently than the profession has heretofore supposed, and not being correctly diagnosticated is, therefore, often mistreated. In regard to the diagnosis, I cannot express my thoughts better than by employing Da Costa's earnest and appropriate words when speaking on the same subject: "I wish to insist upon the necessity of inquiring, in every case of anomalous nervous symptoms (particularly when happening in hysterical persons) in which there is any abdominal pain, into the possible existence of the malady we are discussing. Let the patient's attention be directed to the matter, and the stools carefully examined. The prominence of the signs of the disorder of the nervous system may throw those of the digestive apparatus into the shade. I know this from personal observation; and Copeland[3] speaks of an almost singular case of hysteria, amounting occasionally to catalepsy, in which the discharge of the false membranes from the bowels, and sometimes from the uterus, took place. Do cases ever happen, or rather do attacks in cases happen, in which the membranes are not found in the stools, or are scarcely formed, certainly not in a manner and in extent sufficient to be recognized in the fæces? I believe this possible; and in the diagnosis of such cases is only attainable by laying stress on the general grouping of the symptoms and by a process of exclusion. It is, however, greatly facilitated if we have ever seen the patient during a seizure in which the membranous discharge was discernible."

In regard to the therapeutic indications, I have nothing strikingly new to offer. The treatment must be largely symptomatic, as there is no known specific. I believe all that can be done by drugs can be accomplished by the hypodermatic injection of morphia and the internal exhibition of arsenic, iron, and ignatiæ, to be used continuously for some months in chronic cases. *I would also commend the subcutaneous use of Fowler's solution in cases where it cannot be tolerated by the stomach.* If at the beginning or during treatment the bowels should become loaded with irritating fæces, I would use equal parts of ol. ricini and aro. syr. rhei. in sufficient doses to thoroughly evacuate them; but subsequently would mainly rely on enemata to relieve any existing constipation, as I consider cathartics and all forms of mercury used under these circumstances to be very pernicious in their effects. Bartholow, *loc. cit.*, recommends tinctures of nux vomica and physostigma, fifteen to twenty drops of each, *ter in die*, for the subacute and chronic cases. Electricity has been highly lauded by Cummings, *loc. cit.*, and I think it worthy of further trial. Moreover, this opinion seems tenable when we reflect on the important therapeutic rôle the constant current plays in the treatment of nervous vomiting and the vomiting of pregnancy, diseases which in some of their phases are remotely allied to the one under discussion.

I do not wish to be understood as saying that gastric catarrh causes the vomiting of pregnancy; but it doubtless exists in all cases that are protracted. This subject is fully discussed by Dr. Lente in THE MEDICAL RECORD, page 485, 1878, who presents a very convincing array of personal evidence in favor of electricity, and supports it by that great authority, Dr. T. Gaillard Thomas, whom he quotes as saying: "I know of no other therapeutic agent which I esteem so highly for the relief of nausea and vomiting as I do the electric current."

[1] Medico Chirurgical Review, vol. i., p. 402, 1820.
[2] Dict. Science de Med., vol. xxxii., p. 261.
[3] Dictionary of Practical Medicine, vol. ii., p. 669.

CASES IN PRACTICE.

By E. P. HURD, M.D.,

NEWBURYPORT, MASS.

SUDDEN DEATH AFTER CONFINEMENT.

On Thursday night, May 18, 1882, I was called to obstetrical attendance on Mrs. Mary Phillips, multipara, aged forty. Mrs. P—— had been in good health and spirits previous to labor, and, as her previous accouchements had been easy, expected an easy confinement. The waters had escaped and the os was dilating. There was a lull in the pains, which I improved by taking a nap. I was shortly awoke by the coming on of hard labor and the outcries of my patient. The head was advancing well, and in a few minutes the child was born. The afterbirth followed in a few minutes, a little pressure over the abdomen and traction on the cord being all that was necessary. I adjusted a binder and put dry clothes under the patient. Had not previously taken the pulse, as the patient seemed to be all right. There did not seem to be an excessive amount of blood accompanying the delivery of the placenta. I several times inquired if she was flowing; the reply was in the negative. The womb seemed to be contracting well. While attending to the baby, which was of medium size, Mrs. Phillips raised her head to vomit; she had not previously been nauseated. I saw that she was deathly pale. The pulse was small and rapid, and the extremities cold. A clammy perspiration covered the body. I sprang for the whiskey, which I administered by mouth and subcutaneously, raised the foot of the bed and rubbed the dying woman with hot flannels. It was of no avail; in a few minutes she was a corpse. An autopsy was not allowed, though Dr. Snow, the Medical Examiner, whom I summoned, used his influence with me to procure an autopsy.

Churchill in his "System of Midwifery" gives a number of instances of sudden death after confinement. These cases are generally referred to prolonged syncope. In some of the cases a flaccid or fatty state of the heart was found after death; in others no lesion was discovered sufficient to account for the death. As for the condition which gives rise to this fatal syncope we know little or nothing. It does not depend upon hemorrhage, or the shock of labor, or fear; it sometimes occurs several days after labor and during convalescence. Till better informed, we must regard them as cases of cardiac paralysis, any explanation of which must be hypothetical.[1]

If the above may be regarded as a case of embolus, forming in the left ventricle, and including the aorta, the following case is undoubtedly a typical case of embolism of the pulmonary artery. It occurred in the practice of Dr. George W. Snow, of this city, who has kindly complied with my request to write out a report for THE MEDICAL RECORD. The date of the fatality was immediately subsequent to that of Mrs. Philips, above recorded:

"At 7.30 A.M. May 22, 1882, I was summoned to attend in confinement Mrs. C——, aged forty-five years. Patient had been married thirteen years. First child was born in 1871. No subsequent pregnancy till the last. Mrs. C—— had been quite robust and healthy. I found the membranes ruptured, the os slightly dilated, the vertex presenting. Labor progressed favorably, though slowly. The latter part of the afternoon the head had descended to the perineum. The pains now becoming inefficient, at 5 P.M. I applied the short forceps. The child was delivered with very slight traction. The placenta was expelled in twenty minutes, and the womb contracted well. She complained of after-pains in the night, and the nurse gave her two powders of morphia (one-fourth grain) at intervals of three hours. At 7.30 Tuesday morning, the 23d inst., I found that she was unable to pass her water, and I introduced a catheter and drew off about a quart of clear urine. She expressed herself relieved, and passed a very comfortable forenoon. Pulse 76; skin cool. Did not take the temperature with thermometer. Respiration natural. In the afternoon she began to suffer again from retention of urine, and at 5.30 P.M. I again used the catheter and drew off one and one-half pints. She again expressed herself as feeling very comfortable, and thought that she should have a good night's sleep. At 9 o'clock she told her husband that she had not felt as well for months as she did that evening. Between 9.30 and 10 o'clock she complained to the nurse of a pain or tightness n the chest, and the nurse applied a ginger poultice. In about half an hour she requested to be turned on her side, and the nurse turned her on her left side. Presently the nurse noticed that her breathing was more rapid, and she seemed to be in distress. The husband was immediately summoned, and when he entered the room she said, "I am going." I was called, and reached her bedside at 11 o'clock, when I found her breathing labored and jerky. The pulse was quick and feeble; countenance cyanotic, with an anxious expression. The respiratory acts were now performed with great effort, and were irregular. She was perfectly conscious and realized her situation, and passed away at midnight. Probable cause of death, embolism of pulmonary artery."

[1] Vide Churchill, op cit., p. 527.

PERIODICAL HEMATEMESIS.

Mrs. J. R——, aged forty-six, a resident of this city. This lady has been a patient of mine for twelve years, and is a sufferer from chronic gastric catarrh; at least such is my diagnosis. The salient features of this case are the following: (*a*) Acute attacks of gastritis. These occur once or twice a year; it is now eight months since Mrs. R—— has had a severe attack. She is confined to her bed, with fever of a mild character, has a furred tongue, with tenderness over the stomach, and constipation, and vomits everything (even small quantities of iced drinks) for several days. Then the attack subsides and she resumes her usual health.

(*b*) Occasional attacks of vomiting in the morning and after taking food, and vomiting of blood. There is always much mucus in the vomited matters; the blood is in quantities of from one ounce to four ounces. The latter quantity has never been exceeded.

This vomiting of blood has been periodical for the past nine years; it occurs once a week with singular regularity. Mrs. R—— has precursory warnings of this hematemesis, such as heaviness and fulness in the epigastrium, and headache. She expresses herself as much relieved by the vomiting of blood. The average quantity is four ounces. It is sometimes bright, fresh blood and sometimes clotted.

(*c*) Digestive organs are always in a disordered condition. She lives on dry wheat bread which she soaks in tea; the tea always contains a liberal supply of milk, but no sugar. In fact, saccharine drinks are always avoided. Occasionally a little barley gruel with one-fourth milk is taken. No other food has ever been used, to my knowledge; at least I have her repeated assurances to this effect, and those of her husband and other members of the family. Mrs R—— cannot be persuaded by any considerations to take animal broths or raw eggs, and *I fully believe her assertion that for thirteen years she has not tasted meat:* She has always manifested a strong repugnance toward animal food, and takes (and can take) no spirits, and has only one *penchant* toward alimentary substances that are indigestible—she is very fond of pickles and sour fruits, and has more than once brought on severe vomiting and hematemesis by the ingestion of a small piece of cucumber pickle. Her bowels have always been regular except during the acute attacks above mentioned. The stools are perfectly natural—never clay-colored. There is no particular tenderness over the region of the stomach.

(*d*) Her mode of life is easy and uniform, and she does a great deal of housework. Indeed, till recently she has done all the work for her family, which is small and now consists of only herself and husband. Once a week she has the attack of bleeding from the stomach: she feels oppressed, and suffers from headache, and is obliged to take her bed till the hematemesis passes off. She is now passing the climacteric; has not menstruated for several months; the quantity of blood vomited has been somewhat increased since her menses stopped.

(*e*) She is not *markedly* anæmic, is cheerful and complains very little, though she has a "weak back" and is neuralgic. She is constantly weak and unable to stand any strain or shock. The death of her mother more than a year ago prostrated her for a month or more; a journey in a carriage of two or three miles would be attended with prolonged exhaustion.

I have never been able to detect any hepatic or intestinal trouble, and the heart and circulation are normal.

Mrs. R —— comes from a healthy family without any tendencies to gastric affections. Her mode of life seems always to have been correct. I have no theory to account for the origin of her peculiar infirmities. I do not believe that the principal pathological lesion in this case is relaxation of the stomach. This I affirm after for many years weighing carefully all considerations for and against this supposition. I do not believe that we have here to deal with a case of cirrhosis of the liver, or with cancer of the stomach. The probabilities all point to chronic congestion of the gastric mucous membrane with sanguineous exudation. In fact, this case belongs to what Dr. Lecorchi would define "the hemorrhagic form of chronic gastritis" ("Études Medicales," p. 277, Paris, 1882). Dr. Lecorchi cites a similar case of repeated hematemesis (not, however, periodical, and soon cured) where the gastritis was plainly due to alcoholism. The hemorrhages were regarded as an exudation from the engorged capillaries. In the case of Mrs. R——, the hematemesis certainly seems to be a conservative effort of nature.

Reports of Hospitals.

THE LONDON HOSPITAL, LONDON.

UNDER THE CARE OF DR. SANSOM.

THREE CASES OF ENTERIC FEVER TREATED BY ROTHE'S METHOD WITH FAVORABLE RESULTS.

ROTHE'S method consists in the combined administration of carbolic acid, tincture of iodine, infusion of digitalis, and tincture of aconite in aqueous solution. He relies mainly on the carbolic acid and iodine, which may be therefore said to constitute Rothe's specific treatment. The digitalis he omitted in all cases after the first bottle. Dr. Rothe claims that by this method first the pulse and then the temperature are reduced within from two to seven days. He considers it not to be due to the digitalis, as he did not continue it, nor to the cold wrappings which he used, as they also were only employed during the first few days. In all Rothe's cases this antipyretic action was permanent and all his patients asserted after a few days of this treatment that they felt quite comfortable. A *résumé* of twenty-five cases treated by Dr. C. G. Rothe (nineteen by the carbolic acid and iodine) may be found in the *Deutsche Medicinische Wochenschrift*, Nos. 11 and 12, 1880, by those of our readers who desire further particulars.

Rothe recommended a mixture containing (in one hundred and twenty parts) one part each of carbolic acid, rectified spirit, and tincture of iodine. In Rothe's cases toxic symptoms usually appeared in from two to three weeks.

The following cases were treated on the same plan, but smaller doses were given and the cold spongings more vigorously pushed. It will be observed that toxic symptoms are recorded in none and the results are favorable in all three cases. The record is from notes collated by Dr. C. E. Brunton, House Physician.

CASE I.—Henry F——, carman, aged twenty-nine, was admitted on November 21, 1881. He said his illness had lasted ten days, commencing with a rigor followed by intense headache, shooting pains in the abdomen, and constipation. When admitted he complained mainly of great pain in the head and muscular prostration. Temperature, 104° F.

November 22d.—Is markedly anæmic and appears much prostrated. Is disinclined to talk and appears drowsy. Sordes on lips and teeth. Tongue is red at tip and edges, in centre is dry and brown, and presents transverse cracks. Patient is thirsty and the bowels are confined. There is slight dulness on percussion at the bases of both lungs and the breath-sounds are feebly heard. Breath-sounds harsh at apices. Respirations, 40 per minute. First sound of heart indistinct. Abdomen distended and tympanitic. Tenderness in right iliac fossa. Gurgling questionable. Whole of front of abdomen is covered with a number of small reddish brown spots, apparently the remains of a former rash (syphilitic ?). Amongst these are a few more elevated spots of a lighter red, which disappear on pressure and which may be the ordinary eruption of enteric fever. Edge of liver extends a little below border of ribs. Temperature this morning, 103°. Ordered liquid diet and mist. salinæ. To be sponged every four hours.

November 23d.—Patient about the same. Pain in head principally referred to occipital region, where, on examination, a hard lump, as large as a hazelnut, is found near the occipital protuberance. Front of abdomen and chest now covered with numbers of small reddish brown raised spots, disappearing on pressure. Bowels still confined. Has vomited small quantities of curdled milk once or twice since admission. Temperature remains between 103° and 104°.

Ordered

℞ Acidi carbolici ver..... gr. ij.
Tr. iodi..... ♏ ij.
Sp. vini rect..... ʒ ss.
Aq. cinnamoni ad..... ℥ j.

every three hours.

Cold sponging and packing every two hours: sponge to be sprinkled with a five per cent. solution of carbolic acid.

In the evening, pulse very feeble and prostration increased. Ordered a drachm of brandy every hour.

November 25th.—Temperature has varied between 102° and 103° during the last twenty-four hours. Has passed one motion, yellow and of pea-soup-like consistence.

November 28th.—Temperature has varied between 103° and 104°. Has passed one motion, not very typical. Patient lies in a half-comatose state, has a little delirium, and is very restless at night. First sound of heart extremely faint, pulse small and feeble. Teeth and lips covered with sordes. Tongue very dry and brown, some deep, transverse cracks. No more vomiting. Successive crops of typical spots on abdomen and chest. Muscular tremor in arms and hands. A slight fall (5° F.) of temperature at 4 P.M.

Ordered to add

Tr. digitalis..... ♏ ij.
Tr. aconiti..... ♏ j.

to each dose of the mixture, and to take a dose every hour. Sponging to be continued the same.

November 29th.—Mixture taken hourly since 6 P.M. yesterday. To-day the highest recorded temperature was at 8 A.M. and was 101.2° and at 8 P.M. 99°, during the day the temperature has been generally below 100°.

Patient seems more intelligent and in less discomfort. Has passed one motion partially formed.

November 30th.—Treatment continued the same, but wine is substituted for the brandy. Temperature normal. First sound of heart stronger, pulse slow, but more regular and beats firmer. Patient has had a very comfortable night, free from delirium and is much "brighter" to-day. Complains of no discomfort whatever, but says he is "hungry." Mouth and tongue cleaner and moister, and all the symptoms have undergone a marked change for the better within the last few days. Packing to be twice a day.

From this date onward the temperature remained at normal, the pulse rapidly regained its normal rate and firmness, and the first sound of the heart regained its tone. No fresh spots after 29th and no return of diarrhœa, the motions being formed and of dark color. Return to health and strength was rapid but steady. The frequency of administration of the mixture was diminished gradually up till December 8th, when a weak quinine mixture was substituted. The patient was finally discharged on January 3, 1882, without having had any unfavorable symptoms whatever during convalescence or any tendency to relapse.

Case II.—Joseph F——, aged nine, was admitted on January 5, 1882. No history could be got from him, but it was supposed that he had been ill nearly a fortnight.

On admission, all the symptoms were well marked. Temperature ranging between 102° and 103°. Face flushed; skin hot; eyes have a dull look; pupils dilated; tongue coated with dirty white fur, red at tip; lips and teeth covered with sordes; throat sore; complains of pain in abdomen about cœcal region; slight gurgling there and tenderness on pressure; bowels confined; liver and spleen not appreciably enlarged; abdomen generally distended and tympanitic; sudamina very abundant; on abdomen and back several rose-colored spots, elevated, and disappearing on pressure; heart's first sound weak; no murmurs heard; pulse rapid (140) and dicrotous; loud crepitations heard at bases of both lungs posteriorly. Some impaired resonance also in that region.

Treatment.—Liquid diet; Rothe's carbolic acid and iodine every two hours. Carbolic sponging every two hours if temperature be 102°.

January 7th.—Temperature rose to 104.2° in the evening (highest temperature during illness).

January 9th.—Temperature remains between 101° and 102°.

Each sponging reduces it one or two degrees. Tongue darker, more cracked on dorsum; general symptoms the same; much headache. From evening of 7th till to-day has moaned much, and complained of great pain in the epigastric region. No vomiting or shivering. Specific treatment stopped *pro tem.*, and pulv. opii., gr. ¼, administered to relieve pain.

January 11th.—Epigastric discomfort much less; temperature, 103° last evening; 100° this morning; pulse still over 120, dicrotic tracing taken to-day; first sound of heart weak; motions liquid.

Muco-crepitant râles very abundant in right front of chest, with tubular breathing. Muco-crepitant râles less marked on left front, with tubular breathing at base. At back, much tubular breathing at left base, with liquid râles.

Specific treatment again commenced. From the 11th to the 13th the temperature fell gradually to normal, and, with the exception of two temporary rises, remained so till recovery. With the fall of temperature there was marked cessation of the other symptoms. Tremors have disappeared, and appetite seemed to return. Tongue cleaner. On the 14th, the chest-sounds were much improved; a few spots still remained on abdomen. Pulse 96. Steady convalescence from this point was the rule, but on January 19th a large number of large inflammatory patches appeared on the left side and on the trunk, extremely painful and tender, and which all suppurated. The patient left for the country on February 15th in fair health and strength, and with the chest signs all cleared up.

Case III.—Isaac L——, aged twenty, was admitted on February 2, 1882. Could not state how long he had been ill.

Face slightly flushed. Pupils dilated. Sordes on lips and teeth. Tongue coated with white fur, red at tip and edges. Lies on his back. Abdomen distended and tympanitic. Tenderness in right iliac fossa and at epigastrium. No gurgling. Says he has had diarrhœa during the last few days. To-day passed but one motion, very typical. About forty reddish spots on abdomen and trunk. First sound of heart weak. Pulse 104, feeble and dicrotous. Breath-sounds normal. Temperature between 103° and 104°. Complains of feeling weak and sick. Has had much headache, but none now. Rothe's treatment was ordered—a dose of the mixture to be given every two hours and the patient to be sponged with carbolized water whenever the temperature rises above 102°.

After the first sponging the temperature fell a degree (from 103.2° to 102.2°). It afterward rose to 103.4° in the cour e of the night, but a second sponging reduced it to 101°. It again rose in the afternoon of the 3d, reaching 104° at 4 P.M. (the highest temperature recorded during the patient's stay in the hospital).

February 4th.—Tongue getting brown. Complains of pain in umbilical region. Marked muscular tremor. Dicrotic pulse. Rhonchi heard at the bases of both lungs, but no dulness on percussion. Temperature at 8 A.M. 102.2°; at 12 P.M. 103°.

February 7th.—No abdominal pain now. Increased area of splenic dulness. More sleep last night. Not so delirious to-day. Temperature, 103°. First sound of heart heard better. Pulse very dicrotous.

February 11th.—Has had no delirium during last few days but has been very sleepy. Tongue no longer brown, much clearer. Slight muscular tremors still. Temperature 100°.

February 13th.—Bowels constipated for six days. Still a few faint spots on abdomen. Tongue clearing. Patient "feels hungry." Still sleeps very much. Temperature normal.

February 17.—Temperature sub-normal. Pulse slow and tranquil. No dicrotism perceptible. One or two spots still on abdomen. Tongue now grayish white, not coated. Motions formed. Appetite good.

February 21st.—Still convalescing very favorably.

Remarks (by Dr. Sansom). For more than sixteen years I have adopted the plan of internal administration of an antiseptic agent in the treatment of most of the zymotic diseases. The agents I have usually employed have been the sulphite and sulphocarbolate of sodium. In scarlet fever and diphtheria experience has been extraordinary favorable. In typhoid fever, however, I have hesitated, from the fear that the administration of a saline capable of transformation into the sulphate of sodium might

possibly aggravate the tendency to diarrhœa existing in the disease. The plan of cold sponging and bathing, which came to us from Germany, I have adopted with what I consider to be favorable results. It is to be recollected, however, that the cases which come under our treatment in the hospital are usually very unpromising cases—they are often feeble, ill-nourished persons and the disease has long progressed without treatment. Our results, therefore, from the cold bath treatment alone are not so favorable as those recorded by our German contemporaries. Dr. Rothe's treatment, in addition to the cold treatment, has been founded on those antiseptic principles which I have so long advocated (*vide* "The Antiseptic System," London, Churchills, 1871). He supposes that the combustion of the carbolic acid and iodine enhances the germicide qualities of each. The question has to be decided by experience. The cases here recorded were of exceptional severity; the results, so far, seem to be singularly favorable.

Progress of Medical Science.

Farinaceous Infant Foods.—Under the above title Dr. George B. Fowler publishes in *The American Journal of Obstetrics and Diseases of Women and Children*, vol. xv., No. 2, April, 1882, an inquiry into the chemical composition of the principal prepared foods for infants now found in the market. Dr. Fowler states that he was impelled to undertake the critical examination of some of these preparations on account of the importance of discovering as perfect a substitute as possible for mother's milk, because of the frequency with which we are compelled to employ these foods, and on account of the conflicting experience of the profession regarding their relative utility. He specially emphasizes the fact "that simple microscopic inspection, unaided by chemical means and physical processes, is wholly unreliable and inadequate in determining the composition and nutritive worth of these farinaceous compounds." Dr. Fowler begins the discussion of his subject by alluding to the relative nutritive values of the various grains employed in the preparation of the foods in question, with a view to forming an approximate estimate of the relative proportions in which each should be employed. This basis for a scientific discussion of the subject is founded upon the important physiological fact that, to fully subserve the purposes of natural nutrition, foods must contain albuminoids, hydro-carbons, and mineral matters in proper proportion. Since the proportion in human milk, the natural food for infants, between the albuminoid and non-albuminoid ingredients is as 1 to 2.95, it is just to assume that the same relations should obtain in the artificially prepared aliment. These data would seem to justify our belief that the most desirable substitute for human milk may eventually be synthetically compounded. No elementary food product, however easily digested when employed alone, is sufficient for the maintenance of health or even of life. By proper processes it is, however, possible to vary the relative proportions of constituents in flour produced from any grain by the admixture of flour from other cereals. In this way a food sufficient for prolonged normal nutrition may be prepared. Dr. Fowler next formulates the leading facts relating to the structure of different cereal seeds, and states the chief microscopical features of gluten, starch, dextrine, and other ingredients of foods obtained from this source. The author then gives the results obtained by chemical and microscopical examinations of the various foods of the shops. Their names are mostly familiar. The chief ones are Horlick's Food; Imperial Granum; Ridge's Food; Nestle's Milk Food; Anglo-Swiss Milk Food. Dr. Fowler shows that the actual composition of many of these preparations does not at all correspond with the published statements concerning them. He does not, however, attempt to decide which of the foods is best adapted to the wants of infants, but leaves this question to be settled by practical experiments based upon chemical and microscopical examinations such as he has conducted.

The Abortive Treatment of Buboes and Lymphadenitis Generally by Carbolic Acid Injection.—Dr. Morse K. Taylor, U.S.A., presents a paper on this subject (*Amer. Jour. Med. Sci.*, April, 1882). By abortive he means the immediate and complete arrest of inflammation in the gland, whatever be the cause giving rise thereto; also the prompt and permanent relief of pain, and the prevention of the formation of pus and abscess. An experience of seven years, during which time Dr. Taylor has treated nearly one hundred and fifty cases of various forms of lymphadenitis, both specific and non-specific, has led him to eschew all other forms of treatment and to rely entirely on the injection of carbolic acid. In the cases treated, where they came under treatment before the formation of pus, he states that he has not failed to arrest the process of inflammation immediately and allay the pain in a few minutes by the injection of his standard solution, eight grains to the ounce, of which twenty to thirty minims will be found sufficient. When pus has formed he evacuates it by aspiration unless the abscess is of large size, in which case only a part of the pus should be withdrawn, and a sufficient amount of the solution thrown in to fill its place.

Dr. Taylor states that the carbolic acid treatment gives equally good results in cases where there has been spontaneous opening. The abscess should be washed out, and compression, either by weights or tight bandaging, applied. He advises the use of the ether spray to diminish the sensibility of the part before giving the injection. Care should be taken to reach the centre of the tumor. To this end he lays down the rule that two-thirds of the narrowest diameter of the tumor will indicate the depth to which the needle should be thrust. Dr. Taylor states that the average time his patients have been deterred from their usual employment has been three or four days, and many have pursued their avocation without interruption. As regards the *rationale* of the treatment, Dr. Taylor, accepting the views advanced in the late International Medical Congress, that lymphadenitis is the result of septic absorption from neighboring parts, considers that the anæsthetic action of carbolic acid plays an equally important part with its antiseptic action. The paper is accompanied with the history of twenty cases successfully treated with injections of carbolic acid.

Fatal Cases of Pleuritic Effusion from Failure to Perform Thoracic Paracentesis.—Dr. Henry J. Bowditch, of Boston, whose name is associated with the introduction of an operation that has been successfully performed the world over in a very large

number of instances, now cites two cases where he charges the death of the patient to neglect in one, and delay in the other, in removing an effusion that eventually caused death. One concerned an American student of medicine, treated by a local practitioner in Germany. The patient, though of tuberculous ancestry and personally delicate, had usually enjoyed good health. For six months prior to the last attack, however, he had undergone much affliction of a domestic nature, and his health had been undermined. A severe naso-pharyngeal catarrh was the first bad symptom, and then ensued dyspnœa, lassitude, quick pulse, and rise in temperature, until on the fourteenth day the thermometer registered 104.8° F. Physical examination revealed dulness on percussion over the left lung, below a horizontal line falling one inch below the nipple; bronchial breathing over this area of dulness and roughened breathing above. Apex beat to the right of the normal. An occasional râle and a slight friction sound near the spine, posteriorly. Twenty-four hours later the effusion had reached a point one inch below the clavicle. All this time the treatment ordered had been cupping [wet and dry], calomel to keep the bowels constantly loose, and a restricted diet. An intimate friend, also a medical student, made bold to suggest "tapping" the chest, but was quickly silenced with the remark that it was "too early to think of that operation." The patient gradually became worse, while the attending physician expressed himself satisfied with the progress of the case. Finally, in preparing for a dejection, collapse ensued and he died.

Dr. B., in commenting upon this narrative, maintains his firm conviction that, had tapping of the chest been resorted to on the second day of the increased effusion, and the patient at the same time placed upon a nutritious and tonic diet, with the local use of some mild irritant, such as tincture of iodine to the skin, a different result might fairly have been expected. In the second history cited, Dr. B. was called as consultant to see a little child that had suffered some days from a large effusion. Paracentesis was recommended by Dr. B., but objected to by the attending physician, and a respite desired. On the following day while arguing again as to the medical propriety of the operation, both physicians were suddenly called into the sick chamber to see the little child draw its last breath.—*Boston Medical and Surgical Journal*, January 19, 1882.

Transportation of Diphtheria by the Wind.—It is quite time for us to have some new contribution to the ever-absorbing subject of diphtheria, and this time it comes from an English source. In a paper read before the Epidemiological Society of London, an account is given of a theory by which the propagation of the disease in certain districts is accounted for by the agency of the wind. Dr. Hubert Airy's theory, which has such an amusing but direct relation with his name, is by no means unsubstantial or fanciful. It is based on some thirty epidemics that have been carefully looked into, and where the origin of the disease could be accounted for by the aërial hypothesis. Accordingly, greater force is given to ideas that have never gained widespread acceptance. Particular stress is laid upon a case seen jointly by the author and Mr. Wynter Blyth, where in an outbreak of diphtheria, occurring at an isolated farm-house in North Devon, no clue could be found to its origin other than through the above hypothesis, based on the fact that the wind had blown with unusual force for four or five days before the outbreak, from the southwest, in which direction it was subsequently found that a death had taken place from diphtheria. The same thing occurred at another isolated farm-house on a spur of Ashdown Forest, after the wind had been blowing from the Tunbridge District, where there had been much fatal diphtheria. The disease subsequently appeared on two hills to leeward, without any traceable personal communication. Other cases are taken from Mr. Blyth's paper on "The Prevention and Propagation of Diphtheria" (*Sanitary Record*, May, 1880). Dr. Slade King's "Notes on the Spread of Diphtheria" ("Report of Meeting at Sanitary Institute," Exeter, 1880), and a case published in the Medical Record (January 22, 1881). Interesting studies have been made in the velocity of the wind that determines aërial propagation. Taking as a basis of investigation thirty outbreaks published in a previous paper ("Trans. of the Internat. Med. Cong.," 1881), he finds that, by estimating the mean velocity of the wind for the whole number during the two weeks preceding the outbreak, there was a velocity above the average in the five days immediately preceding, and that it blew from points of infection. Arbitrary isolated points were also selected, and the theory being applied was found to be sustained. If, he urges, the hypothesis of aërial infection is successfully applied to ague and hay-fever, why not to diphtheria? Dr. A. is hopeful that, with the increase in the number of observed epidemics, there will be corresponding gain in corroborative proof.—*British Medical Journal*, April 1, 1882.

Sulphide of Calcium as an Antisuppurative.—Dr. Andrew H. Smith, Chairman of the Committee on Restoratives of the Therapeutical Society of New York, furnishes to the *New York Medical Journal and Obstetrical Review* for June, 1882, a report of the committee on the use of sulphide of calcium for the purpose of preventing or diminishing suppuration. After giving the experience of several members of the society, Dr. Smith concludes his report as follows: Judging from this limited number of cases, it would seem that we are warranted in concluding that in many cases of suppurative affections, ranging from the small pustules of acne to extensive suppurating surfaces, an appreciable, and often a very marked, benefit is derived from the use of calcium sulphide; suppuration which would otherwise take place being averted, or the quantity and duration of an existing discharge being lessened. At the same time its action is not uniform; and in many apparently favorable cases it will fail entirely. The drug is somewhat prone to irritate the stomach, and this circumstance affords an indication for small doses frequently repeated instead of larger ones at longer intervals. One-tenth of a grain every two hours, in acute cases, will generally secure the full therapeutical action of the drug, but larger doses may sometimes be required, and some patients will bear well a grain three or four times a day. Even in small doses the sulphide will occasionally produce headache, and the patient is usually more or less annoyed by eructation of sulphuretted hydrogen.

Iodoform in Tubercular Meningitis.—Professors Moleschott, Coesfeld, and recently Bauer, have reported cases of tubercular meningitis "cured" by the use of iodoform.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, July 8, 1882.

SOME FACTS ABOUT PATENT MEDICINES.

THE manufacture and sale of patent medicines has become a very important element in the business of the country. It is a question whether the money expended upon proprietary mixtures does not greatly exceed that paid for medical services. It may, perhaps, at first glance, excite a certain feeling of sadness in the doctor's mind to think that millions of dollars are thus turned away from their legitimate channels. But the public is, on the whole, rather the more hurt. Medicine is a thing of which the more there is taken the more there is wanted. People who buy patent medicines, in time drift into the doctor's hand. This may be considered as very generally the rule.

But whatever the evil or the blame, the patent medicine trade exists and flourishes. It may and should be reprobated. But occasionally we may also look at it from other than a critical and aggressive point of view. There are many facts regarding the business which have a certain general interest. The history of the origin, development, decline and decrease of certain patent medicines will furnish study to the psychologist as well as to the medical man.

The patent medicine often develops out of some happy prescription of the doctor. Oftener, however, the disease to be cured is selected first, and then the mixture compounded. This disease, however, must be a widely prevalent one. There are, for example, two thousand different corn-cures for sale by the druggists of the country. Among five thousand different articles in one wholesale establishment in this city there are three hundred and twelve pills for constipation and biliousness; also, in the same collection, about two hundred hair-restorers. The cures for rheumatism, and for coughs, colds, and consumption, are about equally numerous, if we may trust an account given in the *Times*. Bitters are also very popular, because they not only cure disease, but appeal to the appetite for alcohol. We note the presence of one hundred and six different varieties among the five thousand referred to.

The right kind of medicine being selected, the first thing to be done is to advertise it. It is admitted that no industry depends so much upon advertising as does that of patent medicines. Here, indeed, is where the business is shown in its most lurid aspect. The genius of the doctor is exercised in compounding his mixture, that of the patent medicine man in telling what it will do. We are told that the moment a new drug ceases to be advertised the demand for it fails. If, after judicious advertising for ten years, the advertisement is stopped, the demand falls about seventy-five per cent. There will then continue for several years a steady call for the drug equalling about twenty-five per cent. of that which originally existed.

The greed of money is at the root of patent medicine failure. The proprietor wants to make his medicine at less cost, and after a while puts in cheaper ingredients. The mixture which costs fifteen cents, and sells for a dollar, is finally made for five cents: there is a little drop in the amount of advertisement, and the demand ceases.

It is not necessary that a mixture have any medicinal power in order to be widely sold. Those who have ever heard of the "Metaphysical Institute" of this city and "Poor Richard's Eye Water" can testify to a remarkable illustration of this fact.

The geographical distribution of the patent medicine trade would be worth some study. Patent medicines invade new countries. In these countries they flourish most where the heart is warm and trustful, the intellect not so well disciplined. The sunny South spends much lucre upon these goods. Some of the public prints are as rank with specifics as our best religious weeklies. In portions of the great West the trade is also particularly prosperous. There is no reproach to be attached to this fact. It is simply a matter of circumstance, of development. As a man becomes more hard-headed he buys less medicine.

Patent medicines will always exist by virtue of the weaknesses of the human mind. Man is sick; he wants to live; he sees a statement that such a medicine will surely cure him. He half believes it, entirely hopes it, and buys the bottle.

SUCCESS IN PRACTICE.

IF the purely selfish man has any real happiness in this world, it must be in the contemplation that he is so much better off than many of his kind. With him there is a complacency in his contemplation of the struggles and non-success of others which is proportionate in degree to the consciousness of his own ease and prosperity. Some men, comfortably housed during a storm, derive an extra warmth from their fire

in the thought that the tide-tossed mariner may at that moment be freezing, or some luckless wanderer, hungry and alone, may be longing for the shelter of a shed. It is not impossible, also, that the same comparisons are often made in other degrees and in somewhat different ways by the successful metropolitan practitioner, who, while rolling in his well-equipped coupé, smilingly glances at the fresh and virgin sign of the young doctor commencing practice. There is such an apparent gulf between them that there is a bewitching pleasure in trying to imagine how utterly miserable the youngster may be, how poor his present prospects are, and what may be the chances of his ultimate success. While he may, with becoming good wishes for the struggler, hope he is aiming for the top, he is quite certain that for the present he is within very easy range of the ill-luck that overtakes the hindermost. And yet we must not judge the successful man too harshly. He may pity the fresh aspirant with sincerity, and yet he may not be able to help him. If the truth can be confidentially spoken, the successful man has no good practice to spare.

A college professor, who, above all others, should strain a point to help aspiring genius, very properly and frankly confessed this to a graduate who was bold enough to ask for aid. That young man is not now laying on his oars waiting for a tow, but has come to a realizing sense of what is meant by paddling for himself. Let us hope that he may not grow faint by the way, and that he may in the end be rewarded. But the struggle in any event must be a patient and weary one, even for those who are determined to help themselves. Unless a young graduate is fortunate enough to find some community which is not already crowded with doctors, and keeps the matter a strict secret from all his medical friends for a year or two, he must be in the attitude of a privileged intruder upon ground previously occupied by members of his craft.

Thanks to the colleges, this supply is constantly kept up, and the young medical man need not be disturbed in his conscience that the people have to suffer for want of medical aid while he is forced to be idle. The realization of this state of things offsets a commendable pity for suffering humanity in which he should indulge and leaves him free for working out his success in the ordinary way of sowing the seed, harrowing the ground, and waiting for the crop.

We are so often asked concerning professional prospects by young men starting out in practice that we offer this as a general answer. It does not make much difference where he settles. Every place is full. The city is perhaps the best place, if the young man can meet his outgo long enough to obtain an income. Everything depends upon his waiting ability. Country practice gives quicker returns, but, all other things being equal, is less profitable in the end, that is from the mere pecuniary standpoint. The best starts are always made in general practice, and the most successful specialists have always been the most thorough general practitioners. But at the bottom of all is honest, patient, and stubborn work. Every one has the opportunity for using this lever, but comparatively few take hold of the right end.

THE AUTOPSY UPON THE BODY OF GUITEAU.

We have the pleasure of presenting to our readers the fullest and most authentic report as yet obtainable of the autopsy held upon the body of Guiteau.

It is already known that the arrangements for the examination were deficient in many respects, owing either to lack of opportunity or of knowledge on the part of those directly responsible. With every wish, no doubt, for the contrary, there was an utter failure to arrange for a thorough and scientific study of the brain. We would not deprecate the value of our correspondents' work, however. All the facts of scientific value, and they are many, that could be gleamed between the tumbling of the brain into a grocer's scales and the final distribution of fragments are presented here by them.

We learn that the membranes were slightly diseased. This disease was of a character which indicated nothing regarding Guiteau's insanity.

As to the brain itself, and its convolutions, there was a high degree of fissural ornamentation, a well-marked asymmetry of fissural arrangement on the two hemispheres, and an absence of the confluent fissural type. There was a well-marked fissural and general development of the frontal lobes. These also, we are told, had a peculiar shape. There was no gross evidence of disease anywhere in the brain-tissue. It is not at all likely that the microscope could have revealed anything. Under the unfortunate plan of unsystematically cutting the brain in pieces, hardly anything can be expected from the microscope now.

On the whole, therefore, the evidence gathered by Drs. Morton and Dana shows that the brain had probably no detectable disease, that it had a somewhat peculiar fissural arrangement, and that it was of rather a high type. The cause of Guiteau's morbid mental state lay in structural or chemical deviations too delicate for detection with our present knowledge.

"GLOU-GLOU PLEURAL."

In the *Révue de Médicine* for May is an article by Dr. Variot, interne in the service of the late Dr. Raynaud at "La Charité," upon a new auscultatory sound heard in certain effusions of the pleural cavity. As this sound has a pathognomonic value, and should also be of easy recognition, we give a synopsis of its discovery and mode of production: Accidentally a patient with mixed effusion in the pleural

cavity, while making movements of flexions and extensions of the trunk, was auscultated, and a sound designated by Dr. Raynaud as "glou-glou pleural" was heard (sound given forth by a bottle decanted of liquid and air entering). This was subsequently confirmed by Drs. Desnos, Laboulbène, and Damaschino upon the same and a second patient then in hospital. Although the term glou-glou is a neologism, Dr. Raynaud thought it adapted itself so correctly to the phenomenon that it would be difficult to replace it. Besides, it would not lead to confusion. The word "gargouillement," besides being less exact, recalls certain cavity sounds met in purely liquid effusions. Passing over the detailed narration of the cases in which the sound was discovered, we notice the circumstances under which the sound is produced.

Both patients in whom it was noticed had pleuritic effusions, which had lasted some time. In both it was supposed there was some gas from fistulous opening in connection with the effusion. Aside, however, from an almost complete absence of the vesicular murmur for a space above the zone of flatness, there were no signs to make the presence of gas presumptive. Nor were there any of the physical signs of pneumothorax. In order to provoke the glou-glou sound, cause the persons to sit or stand, flex the body at right angles to the lower extremities, and rise suddenly from this position. No sound is heard during flexion, or while in that position; during the act of erection, the peculiar sound, similar to the entrance of air in a bottle being emptied, is heard.

Even palpation by the hand, placed behind on the affected side, can detect a sort of interrupted rolling.

Auscultation, however, practised at this time, enables one to differentiate the glou-glou from all other sounds; three, four, or five large bulles are heard, the rapidity of succession depending upon the rapidity of assuming the upright position.

No autopsy having been made in the cases noticed, the mechanism of the sound is hypothetical. The problem can, however, be simply stated. How is it that, in certain mixed pleural effusions where the quantity of gas is too small to give the signs of pneumothorax, you can provoke the "bulles bruits" by flexing and extending the trunk? We answer, these phenomena are due to the reciprocal displacement of gas and liquids. A flat tone when erect becomes sonorous when bent at right angles. This, however, is a condition observed in ordinary pneumothorax.

It requires, then, special anatomical conditions; those which appear the most probable are those which result from a banded pleurisy. This is the more readily assumed, because in the two cases under observation the effusion was already somewhat chronic. The development of new membranes, more or less thick, is the rule under these circumstances, and adhesions, irregular bands, can subdivide the cavity into little pouches. In the upright position, the gas would occupy the upper compartments; in the flexed, the liquid those previously occupied by gas. If these compartments communicate by restricted orifices, we have a sufficient explanation of the large "bulles" which break when the fluid and gas reciprocally traverse these restrictions.

Its diagnostic value must yet be determined. In the cases mentioned, other signs of pneumothorax failed—neither the "amphoric souffle," "metallic tinkling," nor "fluctuation thoracic," were present. The "glou-glou pleural" was, then, a precious sign when the others were absent.

Reports of Societies.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, March 28, 1882.

DR. T. M. MARKOE, PRESIDENT, IN THE CHAIR.

LOCAL TREATMENT OF CARBUNCLE.

DR. A. C. POST presented a patient who came to him with a large carbuncle upon the back of his neck. It had been imperfectly opened and the disease was progressing. A large quantity of disintegrating cellular tissue presented itself at a number of points. He extended the incisions, dividing the outermost edges freely, applied a stimulating dressing with immediate benefit. Considerable arterial hemorrhage occurred from the edges and bottom of the carbuncle when divided, but it soon subsided. The stimulant dressing consisted of basilicon ointment (ceratum resinæ) *two* parts, and oil of turpentine *one* part.

LUMBAR COLOTOMY.

Dr. Post also presented a patient upon whom he performed lumbar colotomy a little more than three years ago. Several years before coming under his care the man suffered from dysentery which became chronic, and the rectum, having been studded with ulcers, became so contracted that every evacuation from the bowels was attended by intense suffering. Efforts had been made to relieve him by making various topical applications, but without benefit. For a considerable time after the operation, the evacuations from the bowels took place almost exclusively from the artificial anus, and the ulcers in the rectum healed. When the healing was complete Dr. Post began to dilate the rectum, gradually increasing the size of the bougie. Finally, a portion of the contents of the intestine passed through the natural channel, and for many months the alvine evacuations had almost entirely passed through the rectum. Twice a month he introduced a flexible rubber bougie, 58 millimetres in circumference, and the fecal mass discharged was of about the same size. Fæces passed through the artificial opening only when the patient had diarrhœa. Gas occasionally escaped through the artificial anus. Dr. Post

thought it was prudent to continue the introduction of the bougie in order to guard against the tendency of the intestine to contract.

INGUINAL ENTEROTOMY.

Dr. H. B. Sands presented a patient with the following history. The man, fifty-eight years of age, whom he saw for the first time in November, 1881, in Harlem, in consultation with Dr. Hays, had been declining in health for five months, his chief symptoms being constipation, dull abdominal pain, and loss of appetite. Dr. Sands' attention was directed especially to a deep-seated swelling in the umbilical region to the left of the median line, which was firm and tender, it giving him the impression that the enlargement might be due to the existence of a morbid growth. A suspicion, however, that it was an abscess, was confirmed after the lapse of a few weeks; and early in December he made an incision about one inch long, and a little to the left of and below the umbilicus, which allowed the escape of a large quantity of fæces, gas, and pus. From this opening and two others, one formed spontaneously, and the other made with the knife, almost all the fæces discharged for three months, and during this period, the patient was, at times, exceedingly ill. After about three months the discharge from the openings ceased, so that three weeks later the abdomen was much distended, neither fæces nor flatus passed by the anus, and the patient presented the usual symptoms of chronic intestinal obstruction.

Dr. Sands saw no way of affording relief except by making an artificial anus, and on the 6th of March, 1882, he established one in the right groin. He did not perform lumbar colotomy, because he did not know the site of the obstruction, and suspected that it might be in the small intestine. The abdomen was distended, the peristaltic movements of the intestines could be seen through the abdominal walls, there was nausea, and the stomach was unable to retain food.

He made the usual incision upon the right side, two inches in length, opposite the spine of the ilium and parallel with Poupart's ligament, and exposed and opened the peritoneum without difficulty. When the opening had been made, two pieces of intestine presented themselves, one of which was larger and more distended than the other, and was the one selected in which to make the opening. From its size, position, comparative immobility, and the fact that it seemed to be adherent to the posterior wall of the abdomen, he thought it might be the cæcum. The artificial anus was established according to the plan of Max Müller, in which, before fastening the intestine in the opening made in the abdominal wall, the parietal peritoneum is drawn forward and united to the edges of the wound in the integument by numerous points of the interrupted suture. By adopting this expedient, adhesion is favored between the parietal and visceral peritoneum, in the neighborhood of the artificial anus, and the danger of fecal infiltration of the muscular and connective tissues is obviated.

About eight stitches of carbolized silk were afterward introduced to secure the intestine in the abdominal wound, and the patient was left for forty-eight hours to allow the formation of adhesions between the opposed serous surfaces. No accident either attended or followed the operation. The adhesions, being firm at the end of forty-eight hours, the operation was completed by making an opening in the gut, one-third of an inch in length, and parallel with the margins of the first incision. The opening of the intestine was followed by a copious and continued flow, for several hours, of semi-solid fæces, which contained a considerable number of orange seeds and lemon seeds. No other foreign bodies were found. The improvement in the general condition of the patient from that time was steady. He was entirely relieved of the distressing symptoms, gained in flesh and strength, and his color and appetite improved. Meanwhile, no discharge took place through the natural anus until day before yesterday, when the patient had a natural evacuation. The mass of fæces was considerable, nearly cylindrical in shape, and about half an inch in diameter. No diagnosis had been made as to the seat or nature of the obstruction; but it seemed pretty clear that it was not due to a morbid growth. The opening, one-third of an inch in length in the intestine, had proved to be inadequate, and distention of the abdomen recurred, so that it became necessary a week ago to enlarge the opening sufficiently to admit the little finger. The result in this case was somewhat different from that observed after lumbar colotomy, in which recovery is usually much less rapid. Dr. Sands thought that the artificial opening could be occluded by a truss.

Dr. Stimson remarked that it was exceedingly difficult to adjust a truss in such cases. With regard to Dr. Sands' statement concerning the prompt recovery of the patient, it coincided with his experience in *three* cases of inguinal colotomy. There was no reaction from the operation, and no serious trouble afterward. In one case, the patient still living, there is more or less escape of liquid fæces from the artificial opening.

Dr. Post remarked that, in comparing the operation in the lumbar region with that in the inguinal region, there were two important considerations. In the first place, which is the most dangerous to life? That has not yet been shown clearly. Opening the peritoneum had been the great bugbear of surgeons, but by ovariotomists it had come to be regarded as a procedure unattended by special danger, unless complications existed, and Dr. Post was disposed to so regard it himself. In the second place, suppose the operation succeeds, which will be attended with the most inconvenience to the patient? It seemed to him that a pad could be kept over an opening in the loins better than over one in the inguinal region, because the motions of the thigh upon the trunk had a tendency to remove the dressings.

Dr. Briddon thought that, if the opening in Dr. Sands' case was in the small intestine, it must be close to the large intestine, because the contents of the intestinal canal at its upper part would cause excoriation of the external surface.

The President said, that one consideration which would probably curtail the value of the operation in the groin, was the uncertainty that almost necessarily obtained as to the precise point where the alimentary canal is reached. In the lumbar colotomy the precise point could be determined.

Dr. Stimson remarked that, in the *left* groin, the large intestine could be recognized with certainty.

Dr. Sands thought there was no absolute certainty in lumbar colotomy.

Dr. Post said, that in a recent case of lumbar colotomy, it was some time before he was able to make out what portion of the intestine was exposed.

Dr. Lange asked if any difficulty was experienced

in drawing the edges of the peritoneal wound and the skin together.

Dr. Sands said, none whatever; that they were readily united, and no protrusion occurred between the sutures.

Dr. Lange had had no experience in the operation, except in two cases where he performed it for the relief of new-born children with entire absence of the rectum. In both cases there was some difficulty in uniting the peritonæum to the external wound. One of the children survived, and died nine months later of summer complaint, with prolapse of the sigmoid flexure, which gave rise to considerable irrita ion from excoriation and eczema. In the other case the child died from loss of blood and septicæmia.

Dr. Briddon asked if there was any greater liability to prolapse of the intestine after the inguinal than the lumbar operation.

Dr. Sands said he was unable to answer the question. The chief trouble, however, that had been noted had been soiling of the parts by fæces.

Dr. Charles T. Poore then read a paper on

CROSS-LEGGED PROGRESSION [see p. 8].

GUN-SHOT WOUND OF THE LEG OF TWENTY YEARS' STANDING.

Dr. A. C. Post narrated a case as follows: Twenty years ago, a soldier at the second Battle of Bull Run received a gun-shot wound in the right leg, injuring the posterior part of the tibia. He made a partial recovery, but had always had since more or less limp, besides a succession of abscesses, the wound closing and then breaking out again. Several weeks ago there was a large ulcerated surface over the tibia, a little above its middle, and covered with granulations. Last week, Dr. Post found a small opening which allowed a probe to pass its entire length behind the tibia. The patient consented to have done what seemed to be necessary, and accordingly he was anæsthetized, an Esmarch's bandage applied, and a free incision, ten or twelve centimetres long, was made over the surface of the tibia, the periosteum separated from the bone, and a large excavation filled with soft granulation tissue was found behind the tibia. Nearly a double handful of this material was scraped away, leaving the excavation empty and clean. There was no necrosis; but about one-half of the thickness of the tibia had been eroded. No foreign body was discovered. There was considerable oozing of blood from the bone as well as from the soft parts. The wound was plugged firmly, and on the following day there still being some oozing, it was again plugged, and at the next dressing the oozing had ceased entirely, and now the entire surface is in a state of healthy granulation. The tibia was affected at about the junction of the upper and middle thirds. The fibula was not exposed.

[At the Stated Meeting, April 25, 1882, Dr. Post exhibited the leg which had been amputated two weeks. It was removed at the knee-joint. The specimen had been examined by Dr. Satterthwaite, and found to be epithelioma.]

POISONING WITH CARBOLIC ACID.

Dr. Geo. A. Peters related a case, with the following history: A child, three years of age, had suppurative inflammation of the knee-joint with some destruction of tissue, for which he made an incision over the outer side of the joint, large enough to give the finger free admission into the joint under the patella. There was some erosion of the articular surface, and he simply washed out the cavity with a solution of carbolic acid 1 to 40. The spray was used during the operation, and the limb was dressed accurately according to Lister's method. The discharge was free, and the dressing was changed within the first twenty-four hours. Suddenly, the child began to sink, gave the ordinary indications of carbolic acid poisoning, dark-colored urine, etc. The dressings were immediately removed, stimulants were used, and the patient soon began to improve, and finally was out of danger.

Dr. Post referred to the antidotal effect of belladonna in carbolic acid poisoning.

CHRONIC TORTICOLLIS—UNSUCCESSFUL ATTEMPT TO STRETCH THE SPINAL ACCESSORY NERVE.

Dr. Briddon reported a case, with the following history: A man, twenty-six years of age, entered the Presbyterian Hospital on the 24th of February, 1882. He complained of spasm of the muscles of the neck, which had existed for six months, first observed as slight twitchings. The right occiput was incessantly dragged toward the shoulder, and the face to the opposite side, all the muscles of the right side of the neck were in action. The patient was intemperate. There was no history of syphilis.

On the 26th of February Dr. Briddon divided the sterno-mastoid muscle by the open incision, but the torticollis remained unaffected. On the 25th of March he endeavored to expose the spinal accessory nerve for the purpose of stretching it. The incision was made along the centre of the upper half of the sterno-mastoid muscle. Some difficulty was experienced in uncovering the muscle completely, on account of the condition of the tissues which resulted from the operation performed in February. The anterior edge of the muscle was finally exposed and lifted from its bed, but he was unable to find the nerve; nor was he able to do so, after having raised the upper third of the muscle from its bed to a point as high as its insertion into the mastoid process. In doing this a nerve was divided, that upon examination proved to be that branch which passes from the sterno-mastoid to the trapezius. He then divided the muscle transversely, but was not able to find the central end. He then dissected away some connective tissue exposed by the reflection of the muscle, but it contained nothing except lymphatic glands. The dissection laid bare the trachelo-mastoid splenius and anterior border of the trapezius, but revealed no nerve. It was then decided to exsect that portion of the accessory that supplied the trapezius, and about one inch was removed, and the wound was closed. So far no benefit has resulted from the operation.

Dr. Sands said that recently he had had an experience which had taught him something concerning this operation. He was asked to stretch the spinal accessory nerve in a case of clonic spasm, but he finally excised the nerve instead of stretching it. Previous to the operation he endeavored to ascertain, upon the cadaver, the best method of finding the nerve. The directions given by De Morgan are to find the nerve where it emerges at the posterior border of the sterno-mastoid muscle, afterward dissecting through the tissue of the muscle until the upper branch is found. In repeating this operation upon the cadaver, Dr. Sands found a good deal of difficulty in reaching the nerve when it was desired

to divide it without cutting through the greater part of the sterno-mastoid muscle. In six cases he found that the division of the nerve into *two* branches took place very near the anterior border of the muscle, and he thought it would be much easier to reach it by making an incision along the anterior rather than the posterior border. In endeavoring, however, to find the nerve by dissection along the anterior border of the muscle he met with some difficulty. The nerve is there not always exactly in the same locality, and it lies very deeply, being closely related to the internal jugular vein.

Dr. Sands finally adopted as the best plan for finding the nerve, to make an incision along the posterior border of the sterno-mastoid muscle, and find the branch which goes to the trapezius; then to make an incision along the front of the muscle, and use the posterior branch as a tractor by which the tissues overlying the anterior part of the nerve can be made prominent, and thus indicate its situation. Adopting this method in the case referred to, he divided the nerve about half an inch above its division into branches and removed half or three-fourths of an inch. Without this aid afforded by traction, there is a risk of not finding the nerve, and also of doing damage to contiguous parts.

What the result was in his case he did not know. He had met with the report of a remarkable case, in which the spinal accessory nerve was exposed and divided without result; but it having been noticed that pressure upon the sound side of the neck, at the point where the nerve emerged from the muscle, stopped the spasm, the operation was repeated upon that side of the neck with the result of arresting the contractions on the side affected.

Dr. Briddon referred to two cases of clonic torticollis reported by Dr. Southam of the Manchester Royal Infirmary.

In one case, of twenty-seven years' duration, he stretched the nerve through an incision two inches in length along the posterior border of the sterno-mastoid muscle, exposing the nerve as it passes to the trapezius. In the second case he did the same operation, and with the same unsuccessful result.

Dr. Lange referred to a case in which myotomy had been performed without benefit, and in which he stretched the spinal accessory nerve with only slight benefit. Finally he cut through the muscles at the back part of the neck upon the opposite side, as they were evidently hard and contracted during the attack of spasm. That relieved the patient to the extent that he could keep the head quiet, but the protracted effort necessary to do so tired him, and the clonic spasm returned.

RAPID LITHOTRITY.

Dr. J. C. Hutchison presented calculous material removed by rapid lithotrity from the bladder of a man, sixty-nine years of age, who, so far as he could ascertain, first had symptoms of stone two years previous to the operation. There was no history of renal colic. The patient had an enlarged prostate, and had occasionally suffered from retention of urine. The symptoms of stone were not severe. The urine was examined previous to the operation, and found to contain oxalate of lime and uric acid, and the inference was that the calculus was composed of these two constituents. Bigelow's instrument was used, the largest catch being three-fourths of an inch. The stone was crushed without much difficulty and removed through a tube, No. 29, French. Within one hour after the operation the patient got up and walked to the water-closet without inconvenience. The following morning his temperature was 100° F.; he passed his urine without trouble; it was somewhat bloody; his appetite was good, and he felt comfortable. The next morning after that his temperature was normal, the bloody urine had ceased, and the patient was discharged from the hospital cured, within a week. The operation lasted sixty-five minutes, and the amount of material removed was 216 grains. Dr. Hutchison had examined the man's bladder subsequently, and found nothing to indicate the existence of calculous débris or another stone. The lithotrite was introduced but once, and the tube but once. The specimen was interesting, as illustrating the value of rapid lithotrity in old men, and the little disturbance which the operation sometimes gives them.

Dr. Lange exhibited a case containing materials, with special reference to the permanent antiseptic dressing, after which the society proceeded to the transaction of miscellaneous business.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 15, 1882.

Dr. Robert F. Weir, Vice-President, in the Chair.

The Statistical Secretary announced the death of Dr. John W. Corson.

Dr. J. Knight read a paper on

STATIC ELECTRICITY AS A THERAPEUTIC AGENT,

in the use of which he had had experience for over fifty years. The author of the paper regarded the source from which it was obtained as a matter of some importance, and made a brief review of what had been published on that point:

"The earth may therefore be viewed, first, as one large electrical machine, of which the direction of the current is from east to west; and, secondly, as a vast magnet, of which the poles are beneath the surface, and of which the directive force is nearly parallel with its axis, or from north to south. Electricity of the atmosphere (and as termed static electricity), of which the atmosphere abounds, is derived from the thermo-electricity of the atmosphere. Electro-magnetism, represented in the small electrical machines now in use, is simply the reversing of the magnetic poles, eliminating static electricity (Knight).

"Static electricity, from the universality of its action, doubtless plays an all-important part in the sustentation of health, the germination of plants, the production of ozone, rain, snow, hail, and tempest (Prout).

"Static electricity increases in proportion as we ascend from the surface of the earth, and at a certain height becomes uniform and constant. Dry and pure air is one of the most complete non-conductors of static electricity, tending to a maximum quantity, and lessens in gradation to the increase of moisture, the earth being invariably in a minor condition.

"The usual condition of static electricity is in a lower degree during the night, and its minimum at about 3 A.M.; it increases at sunrise, and diminishes about noon, increases again toward sunset, and becomes lessened during the night, being much affected by the winds (Brand).

"Professor Quételet, Astronomer Royal of Belgium, states that atmospheric electricity is in the highest intensity during the month of January, and attains to its minimum in June. The distribution of atmospheric electricity diminishes from the equator to the poles.

"In Norway it rarely thunders; in Iceland once only in two years; in Peru never (Kosmos).

"Professor Glaisher, meteorologist, of London, states that the prevalence of epidemic or pestilential disease has been associated with the absence or deficiency to that of a maximum diffusion of atmospheric electricity; and the mortality has been found to be in the inverse ratio of the amount of electricity with which the air is charged. On the contrary, when the air is charged to a maximum condition throughout the day, the number of deaths decrease. And to this electrical condition or influence I have had ample experience to confirm what has been stated by this high authority, during the visitation of Asiatic cholera in this country."

In the winter of 1834 a glass-cutter applied to him for treatment of his paralyzed right wrist (now known as "dropped hand")—the member being powerless as to extending the hand—produced from exposure to cold water dropping upon his hand and the grindstone upon which he was cutting ornaments upon glass on a cold night in winter.

From a small cylindrical static electrical machine, and a six-ounce Leyden jar having about one-half of the inner and outer surface covered with tinfoil, he applied light shocks to the arm, from the shoulder to the extremity of the phalanges, daily for two weeks, the hand increasing in power all the time, and finally was restored to a normal condition. After this he continued to use static electricity in cases of infantile paralyses and various other neuralgic derangements, in the Baltimore General Dispensary, for six years with most favorable results.

In 1835 he located in New York, and had resorted to the use of static electricity whenever he could, and employed dynamic electricity only when, on account of the condition of the atmosphere, etc., the other form could not be applied. Notwithstanding his preference for static electricity whenever it could be applied, the dynamic electricity was an exceedingly valuable agent.

Static electricity is subject to many forms of application, differing from the dynamic, and, as he believed, more extensively useful as a therapeutic agent; producing two distinct influences upon the animal system, as an *excitant* and decided *sedative*. The dynamic is merely an excitant and not available in diminishing directly morbid nervous energy in muscles as the former, and only indirectly by restoring normal energy by effort, in time. In the operation of static electricity when insulating patients and producing a maximum diffusive quantity of static electricity, and then drawing it off with sharp metallic points connected with the earth, the influence is so great as to induce syncope in delicate persons, as he had frequently witnessed. The influence is only temporary, however, tending to a normal restoration of nervous influence and a reduction of local inflammation.

Electric Shock.—By means of the Leyden jar the most powerful concussion is given, even to the degree of destroying life.

The shock being used as a curative means, can be definitely modified by having a lesser or greater surface of glass coated on both sides with tinfoil, so insulated as not to be connected by two or more inches from the metallic surface on both sides, by which the intensity of the accumulation can be obtained that will give the shock required. By this, decided tetanization of muscles is induced, using, in place of one or both balls of the electrodes, disks of sponge moistened.

These several modifications of static electricity he considered as excitants, or sedative, and subject to diffusion or localization.

The various conditions of the application of static electricity are only preparatory to various modifying effects to be obtained in accordance with the desire and judgment of the practitioner; differing from that of dynamic electricity in its availability to the practitioner as a means of controlling the various morbid conditions of nervous energy, as that of *deficiency* or *excess*, without permanently injuring the normal conditions of tissues or organic functions. Static electricity is a powerful therapeutic agent, requiring not only a profound knowledge of the natural laws regarding it, but an equal knowledge of anatomy and physiology. If applied locally to the muscles, their origin and insertion must be known to the operator, and if made to act through the nerves, then their connection with the nervous centres, their course, anastomoses and termination, also of the laws which regulate the electrical currents in the muscles and nerves, and the relation of these laws to the vital and physical forces. This applies equally to all the devices for generating electricity, and its application as a remedial therapeutic agent.

One of the most common objects of electrical application is to co-operate with vitality. This, indeed, may be considered the central principle in the medical use of electricity. In the nervous system it is illustrated in cases of exhaustion, prostration, enervation and paralysis; in the tissues, in gangrene, erysipelas, in indolent ulcers and deficient nutrition. It will be found, indeed, to enter more or less directly into every case of the application of static electricity.

Electricity constitutes, in the hands of the medical practitioner, a reactive power. According to Matteucci, the nervous system responds to electricity after all other stimulants have ceased to act.

An influence frequently exerted by electricity is that of changing the action of an organ, or the general tone of the system, thereby arresting a diseased condition.

In deficient nutrition, electricity may co-operate in the vital transformation and organization of the nutrient matter, by means of the nervous system or by direct action on the tissues of a part. To produce increased action in the latter case, static or galvanic electricity may be used. This will be done wherever a part needs to be nourished, or the waste of any organ to be replaced. As a general rule, the current should be feeble and the application long-continued and frequent. For this purpose static electricity is much more efficient than dynamic.

In effusions of serum, or lymph, in some forms of hypertrophy, in bony deposits, rheumatic enlargements and every undue organic development, with the exception, perhaps, of some malignant growths, the power of the absorbents needs to be quickened, and this may often be effected by electrical action. In serous effusions accompanied with inflammation, cautious and gentle application of static electricity will be effectual.

CASE.—Col. I——, of Great Barrington, Mass., was most seriously afflicted, having synovitis affecting

nearly every joint in his formation. The cause was exposure to a running stream of cold water for a considerable duration of time, in repairing a mill-dam in the month of April, 1836. The first indication of the invasion was an inability to rotate the neck and then the back and thigh-joints; then the knee and ankle-joints, and finally the arms and wrists, to such a degree as to leave him in an entirely helpless condition. Then followed a chronic diarrhœa, that necessitated the taking of large doses of opium to retain any nutriment. His complexion was sallow, his joints enlarged and painful, but with no appearance of superficial inflammation. This had all intervened from April to November, when treatment by static electricity was commenced and applied daily with light shocks, from the cervical region to the extremities—the patient being placed upon the insulating table. After three months' treatment, varying the mode of application to and from the patient, the diarrhœa ceased and the appetite increased; but an intolerable irascibility ensued, with apparent congestion about the head. Venesection was resorted to, and much relief and comfort afforded the patient. It was then observed that he could again use his hands and had some power to move the elbow and shoulder-joints. After ten days a similar condition of distress ensued, and relief was again afforded by venesection of about sixteen ounces. After this he was able to push a chair before him and thus walk. The joints were much lessened in size and comparatively soft from that of almost cartilaginous hardness. From this time his physical condition gradually improved, and locomotion became more and more tolerable, so that in the following month of May he was able to mount a horse and ride, although his back and neck remained partially fixed.

In the London *Lancet* of June, 1846, a statement appears of Dr. Golding Bird's experience in the use of static electricity in Guy's Hospital, London, which agreed most closely with his own. Dr. Bird, from his large experience, classified the following forms of paralysis that are relieved by the judicious application of static electricity:

1. Partial paralysis from organic congestion, or effusion, which has been removed. 2. Paralysis of the portio dura, of the seventh pair, from exposure to cold. 3. Paralysis of a limb from the same cause. 4. Paralysis of one side of the body or a single limb, from exhaustion—as from lactation and flooding. 5. Paraplegia from rheumatism, paraplegia from enervation.

He found the use of electricity most successful in recent cases, and contends against its use in many of the established organic lesions; stating that he has known fatal apoplexy to follow its application in cases of ramolissement of the brain, or where indurated arteries existed. Dr. Knight here stated that venesection is essential in the treatment of these cases with static electricity, and dangerous if omitted.

In regard to the efficiency of static electricity, Dr. Golding Bird expresses his favorable opinion of its use in the treatment of nervous diseases, of which a synopsis was given.

Dropped hands are often the result of long continued position of the hands in a state of tension, as occurs in some occupations when closely applied to labor—shoemakers, clerks, and persons engaged on fine needle-work, or any similar employment requiring the fingers to be fixed and long retained in a state of tension. Of this class of patients, nearly every one is perfectly curable with static electricity, and often after dynamic electricity has failed.

In the treatment of this variety of partial paralysis of the forearm and hand, we but seldom insulate the patient, and simply pass light shocks from the elbow to the extremities of the fingers, having an elastic spring support applied, to keep the hand extended by such support. From this treatment of patients under fifty years of age laboring under this ailment, we know of no failures to improve the condition of the arm and hand, although a great number presented themselves for treatment, every year, at the Hospital for the Relief of the Ruptured and Crippled. Ordinary splints to keep the hand extended serve a tolerable purpose, and should be made available where elastic support cannot be obtained.

In the use of static electricity as a curative means, great care in its application was necessary. He had seen patients irrecoverably injured by injudicious treatment with both static and dynamic electricity. Matteucci had pointed out the entire exhaustion of nervous power, similar to paralysis, resulting from an excessive use of electricity. If the improvement ceases under the use of electricity, Dr. Knight recommended the discontinuance of the agent for a week or two. The progress in treatment by electricity is by this interim of rest rendered again susceptible to improvement, and more especially after a strengthening regimen, with tonics and friction, carefully guarding the patient from exposure to cold.

Dr. C. L. Dana had used static electricity considerably during the last six months, and had been satisfied with the results obtained. Recently he had been interested concerning one point, namely, as to how deep the electric current was diffused. He had had two cases in which the functions of the liver seemed to be stimulated by the local application of sparks. It was a question whether the action was direct or reflex. A study of the subject led to the view that when the patient is isolated and charged he is in a kind of electrical bath, the electricity being entirely superficial. Dr. Dana then recited several experiments he had performed with the view to obtaining information on this point. From what he had been able to learn by these experiments, as well as by study of books and questioning one or two physicists, he concluded that static electricity did not penetrate the body to any great extent. When strong sparks are drawn there is some local penetration. That there were good effects produced in a reflex manner there could be no doubt. He also knew that tonic effects were produced sometimes. It remained to be proved, however, that benefit is obtained in a larger percentage of cases requiring tonics by the use of static than by the use of dynamic electricity.

Dr. W. J. Morton reviewed the history of static electricity, and claimed the credit of having revived its medical use in this country, a fact which the author of the paper had not mentioned. He believed that it should be used in large quantities, rather than in the small quantities recommended by Dr. Knight. He thought there was no efficacy whatever in the shock from the Leyden jar. He believed that, in order to obtain the best results, the electricity should be applied as near as possible to the diseased tissue; and that it should not be used as a general agent, as is exercise, bathing, hygienic measures, etc. The classes of cases in which he had found static electricity especially serviceable were: (1) cases of spinal irritation so-called; (2) soreness after subacute and chronic rheumatism and gout;

and (3) when he wished to exert the muscles, as in cases of infantile paralysis.

Dr. A. D. Rockwell thought the interesting question was not so much as to the absolute value of static electricity as to its value when compared with other forms of electricty now in general use. To Dr. Morton belonged the credit of having revived the subject of the use of static electricity, and with him he agreed that it had a tonic restorative power of high order; but that static and dynamic electricity were equal in therapeutic value, he did not endorse, and he regarded it as unfortunate to have the idea get abroad that the static was superior to the dynamic, when it was not. One benefit which he had derived from the use of static electricity had come from its supplementary power; that is, when dynamic electricity had ceased to produce effects, or reduced effects, the static would, in many cases act satisfactorily, With reference to the depth to which electricity penetrates the body, he thought that the inner portions of the body were affected considerably.

Dr. Knight said, in closing the discussion, that certainly Dr. Morton was entitled to the credit of having revived the use of static electricity in this country, and he was unable to understand why such an omission had been made in his paper.

Dr. F. D. Lente then read a paper on

A HITHERTO UNDESCRIBED LESION OF THE KNEE-JOINT.

Without naming the conditions, he gave its clinical picture by the recitation of several cases. It results from a variety of injuries, apparently of a trivial character, perhaps the most common was that which twisted the joint slightly and gave the patient almost momentary inconvenience, followed by slight pain and stiffness, more pain on the following day, increased by walking; improved under treatment with splints and relapsed as soon as they are removed; slight swelling with thickening of the tissues, perhaps slight effusion into the joint, no heat, etc. In this condition there is usually less pain when the limb is straight, whereas when the joint is diseased the flexed position is most comfortable. There is a point of tenderness on the inner aspect of the knee. The treatment which he had adopted successfully had been a fixed dressing—silicate of soda splint—worn uninterruptedly until the knee got well. For the pain, blisters might be required, and these could be applied through fenestra. The stiffness which remained after removal of the splint could be readily overcome by passive motion. Forcible rupture of the fibrous anchylosis might be necessary in exceptional cases, where the patient lacked the fortitude necessary to endure the passive movements.

Dr. Weir referred to cases in which slight injury of the knee-joint had been followed by serious lesions, and the most satisfactory results had been obtained by such treatment as secured absolute rest. He had been rather inclined to look upon some of these cases as ones in which there was inflammation of a semilunar cartilage, and in certain cases the difficulty might go on to the development of fungoid disease. The severer forms, however, had not been considered in the paper, but only the milder forms and the plan of treatment was eminently practical.

Dr. L. H. Sayre referred to the great liability of slight injuries of the knee-joint, also other joints, being overlooked when really all such injuries were of a serious character, because they might be the starting-point of what would destroy the usefulness of the limb. Most serious joint disease had very frequently commenced in just the way Dr. Lente had described.

Dr. A. B. Judson supposed that it was impossible to make an absolute diagnosis of the exact lesion in these cases, because of the inability to look in, and therefore we were at liberty perhaps to indulge in surmise concerning the portion of the joint primarily affected. It had occurred to him that possibly the explanation could be reached by the supposition that some tissue of the joint, cartilage, ligament, or bone might be in a morbid condition, which rendered it liable to suffer discomfort which otherwise would pass without notice. He regarded them as cases of disease of some tissue entering into the formation of the joint rather than cases of accident.

Dr. Gibney asked Dr. Lente what lesion he had diagnosticated.

Dr. Lente said that he had not made a diagnosis. But from the fact that the painful point in all the cases had been within half an inch of the same anatomical position he had thought it might be a condition due to straining of the semilunar cartilage on the inner side of the joint.

Dr. Gibney said it was somewhat difficult to say whether any of these cases were neuroses or not. But the lameness appearing so soon after the injury made the condition appear as though it might be ligamentous arthritis, and put the patients into that class which get into the hands of bone-setters and yield such brilliant results. There was one interesting point in connection with the treatment and it was that joints can be kept fixed for a long time without danger of anchylosis.

Dr. Lente thought that pre-existing disease could be excluded in his cases, because all the patients were apparently in the most perfect health when the injury was received. In all the cases which he had seen, with a single exception; there was no evidence of the existence of any nervous affection or hysteria.

The Academy then adjourned, to meet on the first Thursday in October.

NEW HAMPSHIRE MEDICAL SOCIETY.

Ninety-Second Annual Meeting, held at Concord, June 20 and 21, 1882.

(Reported for The Medical Record.)

The Association met in Union Hall at 11 o'clock A.M., the President, Dr. Hadley B. Fowler, in the Chair.

After the ordinary routine of business incident to the opening, the report of the meeting of the Councillors was read by the Secretary and approved by the Society, and upon their recommendation eighteen new members were elected, who appeared, and were admitted into full fellowship after signing the Constitution and by-laws of the Society. Several other applications for membership were favorably acted upon by the Council, but a rule of the Society requires the applicant to be present to sign the Constitution as a proof of his intention of becoming a *bona fide* member; therefore, all such applications were laid on the table until such time as the friend or voucher for the applicant should call it up.

The roster of the Society showed that over one hundred and thirty members were present, which is a large number for a society of only two hundred active members in a State like New Hampshire, that is sparsely settled, and has but a few moderate-sized business centres.

It is one of the by-laws of the Society that the President shall deliver an address at noon of the first day of the meeting. Consequently, at that hour the Vice-President, Dr. Crosby, of Concord, assumed the chair, and PRESIDENT FOWLER read an excellent paper, that was listened to by the Association with the closest attention.

He referred in fitting terms to the members deceased during the past year; congratulated the Society upon its general prosperity, and then devoted a little time to the ethical relations existing between the profession and the pharmacist.

The Doctor was very severe upon physicians who endorsed or recommended any proprietary medicines. In regard to the temperance laws, he recommended that every one be held responsible for his own acts, and that drunkenness be declared a crime punishable with a fine for first offence, and by five years' imprisonment for sixth offence. The address was full of wise words, kindly spoken, witty and instructive, and will be published.

DR. C. F. LESLIE, of Sunapee, read a report on Practical Medicine, devoting a considerable portion of the paper to typhoid fever, that seems to be particularly prevalent in his locality. The town is situated on a lake of the same name, the principal village being at the outlet. This body of water is about ten miles long, with varying width, of from one-fourth to one mile; is about twelve hundred feet above the level of the sea, and is very clear and cold; with a *minimum* of alluvial land about its shores, or of deposit in the bottom. The doctor reported that he had treated cases of typhoid fever, occurring in every month of the year, and always had the most cases when the water in the lake was the highest. From this one might infer that the lake water had some source of contamination that was directly responsible for the frequency of the fever; but, as the water of the lake is not used for domestic purposes, it would seem that it was a coincidence rather than a cause.

PROF. FIELD, of Dartmouth Medical College, read an essay on "The Balsamic," that was well written and exhaustive in its character; and a mere abstract of the paper would fail to do him justice.

DR. E. F. MCQUESTION, of Nashua, read a report on surgery, giving a review of the legal case of Holt vs. McQuestion, tried in Hillsborough County, in 1881, for alleged malpractice (in which the verdict was given for the defendant), and several other surgical cases where the ankle-joint was injured. He recommended that the society prepare a new law which will oblige those parties bringing suits for malpractice to give bonds to indemnify the defendants if their charges are not sustained.

DR. G. L. MASON, of Laconia, delivered an oration on the "Now and Then" of the medical and surgical methods of the orthodox practitioners. He spoke of some of the remarkable cures effected by the heroic treatment of old, and asked the question: Would they get well now if bled and blistered and dosed with tartarized antimony as they were a half century since?

DR. SMITH, of Hanover, exhibited a "horseshoe" kidney, and read an essay upon the subject.

DR. I. A. WATSON, Secretary of the State Board of Health, read a paper on "State Medicine," recommending to the medical profession the educating of the people upon sanitary and hygienic matters as the only effectual method of the prevention of diseases that are produced by bad sanitary conditions. He pointed out many of the dangers of improper ventilation of dwelling-houses, school-rooms, churches, public halls, etc.; also the serious results that follow water contamination, and the great danger of pollution of wells and springs from the filthy conditions that surround many houses. Many instances and illustrations were given, showing that the poison of typhoid fever and some other diseases might be conveyed a long distance in water currents, even under ground, and then produce disease in some other localities. He asserted, with proof, that the popular idea that ice was always pure because the process of freezing eliminated its organic impurities, was a false theory, and that ice from any source but that of pure water was dangerous to health. He believed that the public entertained false ideas concerning contagious diseases; that scarlet fever and diphtheria should always be as promptly and efficiently isolated as small-pox, since they were infinitely more fatal diseases. The paper appealed strongly to the profession to endeavor to correct many erroneous ideas and to leave no efforts undone to prevent disease and to secure the greatest possible good for the people. He urged the profession to become co-workers with the State Board of Health to secure such reforms.

DR. M. T. STONE, of Troy, read a dissertation upon tobacco, and DR. H. M. FELT, of Hillsboro, a paper upon "Emetic Medication." All the above papers were referred to the Committee on Publications.

The anniversary dinner was served at the Phenix Hotel and *post prandial* exercises were conducted by the Anniversary Chairman, Dr. Chas. A. Tufts, of Dover, who in well-chosen words introduced President Fowler to respond for the New Hampshire Medical Society. His Honor G. A. Cummings welcomed the visiting physicians to the city of Concord.

REV. MR. PARKHURST responded for the clergy and gave a fine description of the doctor's influence upon the community in which he lives.

HON. J. W. PATTERSON responded to the cause of education. He pleaded for the assimilation of mental food to insure mental growth.

DR. GAMWELL responded for the Massachusetts Medical Society.

During the evening session the Committee on Necrology reported the deaths of Dr. E. K. Webster, of Pittsfield; Dr. Harrison Eaton, of Merrimack; Dr. John A. Dana, of Ashland; and Dr. A. B. Hoyt, of Grafton. All the decedents had been honored members of the Society for a great many years, and appropriate notices were read and referred to the Committee on Publications.

On Wednesday the Society convened at eight o'clock in the morning, when reports of committees and delegates were in order, and at nine o'clock the following officers were elected:

President, Dr. A. H. Crosby, of Concord; *Vice-President*, Dr. J. W. Parsons, of Portsmouth; *Treasurer*, Dr. D. S. Adams, of Manchester; *Secretary*, Dr. G. P. Conn, of Concord; *Anniversary Chairman*, Dr. A. P. Richardson, of Walpole; *Executive Committee*, Drs. J. W. Parsons, of Portsmouth; P. A. Stackpole, of Dover; and M. W. Russell, of Concord, with a Council consisting of twenty members and a board of ten Censors. Also delegates to Dartmouth Medical College and the various State societies and the American Medical Association.

The Committee on Patients reported upon the cases presented to their notice, and considerable time was spent in miscellaneous business, when, at 12.30 P.M., the Society adjourned, to meet again in Concord the third Tuesday in June, 1883.

Correspondence.

MEDICAL IMPRESSIONS OF CHINA.

To the Editor of The Medical Record.

Sir: On my return from Canton, ninety miles distant from Hong Kong, it occurred to me that a brief sketch of a few features of this most characteristic of Chinese towns, might be of interest to the readers of The Medical Record.

Canton, the provincial capital, with one million inhabitants, lies on the north bank of the Pearl River, in latitude 23° 7′ 10″ N., and 113° 14′ 30″ E. longitude, nearly parallel with Havana and Calcutta; its climate, however, is colder than that of either of these cities. The houses are, with few exceptions, of only one story. The streets are very narrow, not exceeding six feet in width. The houses of the better class are built of substantial brick; those of the poor, with sun-dried brick. The roofs are massive, being covered with closely overlapping tiles. From the condition of the great bulk of the houses of the lower classes—these houses having earth floors, and a damp subsoil—rheumatism is a common complaint. The cases of rheumatism are almost entirely muscular or syphilitic; the acute variety being rarely met with. There is a complete disregard of sanitary laws. No closed underground sewers or drains exist, save a rudely-constructed covered gutter in the centre of the street, which carries off the superfluous rain and the slops of the houses lining the wayside. These drains are covered with stone slabs, placed so far apart that one can see the water beneath them; and the air, saturated with impurities of human excreta and other decomposed substances which emanate from the drains and privies, defies the tolerance of even well-blunted olfactories. Even my Chinese guide was forced, every now and then, to compress his nostrils as we made our way through the city; and yet this air is inhaled by the native apparently with utter impunity, for, with the exception of ague, which is quite prevalent, the diseases which we should expect to find very general are met with only exceptionally. The latrines are very numerous, and nothing is used to interfere with the results of decomposition. Their contents are allowed to accumulate for days, until they are filled, and they are disposed of to the farmer, and carried through the streets to the jetties in uncovered buckets, generally during the day. Filthy creeks, containing decomposed refuse, ramify into different parts of the city, discharging their nauseous odors at the doors, and, in many instances, under the floors of the houses. The river water is greatly used, and that used for culinary purposes by the floating population, or those who live in sampans or boats, along the jetties, is extremely filthy, and must be contaminated with human excreta and other impurities. Here, then, are the causes which are supposed to produce typhoid fever, in full operation, but this disease is rarely met with in Canton. However, the evidence favoring the view that the poison of typhoid fever is communicated through contaminated water is not weakened by the absence of this disease in this and other Chinese towns, because the water drunk is, perhaps, always first boiled and is generally used in the form of tea: the process of boiling would necessarily destroy the organisms which are supposed to give rise to this disease. The privies of the natives are mostly out of doors; those of the foreign population, although in the house, are of the portable kind, and are visited daily by a scavenger, who carries off the contents. The Chinese collect and preserve with the greatest care every particle of every kind of manure, besides rags and paper, etc., and turn them to practical use. Human manure is of high value, and is, therefore, collected with great assiduity for agricultural purposes; large numbers of people in this way obtain a living. The healthiness of the foreign population of Canton is certainly in a great measure owing to the absence of water-closets in the dwelling-houses, which at home are a fruitful source of disease. Sulphuretted and carburetted hydrogen gases are evidently not so injurious to health when given off in the open air as when escaping from sewers. Canton, like the whole country, is a city of bad smells, and yet the people do not seem to suffer from them, but, on the contrary, rather like them. The removal of excreta, and the disposal of sewer water is the sanitary problem of the day at home and abroad. Our sewers allow the transference of gases and organic molecules from house to house and from place to place. Occasionally, by bursting, leakage, or absorption, the ground is contaminated, and the water supply is in danger of being contaminated and poisoned; and all these dangers are greater from being concealed. In China, there is at least freedom from one of these dangers. *It would certainly seem advisable that our water-closets should be in a projection from the building, with a tube passing to the outer air.* There is something instructive to us in the effects of the absence of sanitary law in this Chinese city. There is no typhus, rarely typhoid, and none of the other diseases, diphtheria, etc. (considered the inevitable consequence of defective sanitation), although Canton, as well as every other Chinese town, is full of typical typhus dens. Fortunately, however, filth, overcrowding, and poor food are not the only factors necessary for a typhus epidemic, or else the lot of the foreign residents in China would be a sad one indeed.

I cannot close without paying a passing tribute to the zeal and indefatigable devotion to medical science which I witnessed in the American Medical Missionary, Dr. J. G. Kerr, in Canton. This gentleman has practised his profession in China twenty-nine years, and is well known in America as one who has performed lithotomy perhaps oftener than any living surgeon; but I am sure that, owing to the great modesty of the man, only a small part of the good work he is doing is known to his countrymen. He is a well-informed surgeon, and the amount and quality of the work performed by him at his hospital, under so many disadvantages, is remarkable. There are accommodations for one hundred and fifty patients in his hospital, and the attendance of outpatients is very large. In addition to the arduous duties at the hospital, the doctor devotes much labor to translating into Chinese such English works as he believes will be useful to the people among whom he is passing a life of such self-sacrifice. A more useful and sincere medical man does not live in the East.

Joseph A. Andrews, M.D.

Hong Kong, May 9, 1882.

A Garibaldi Memorial Hospital.—Efforts are making to secure money for the erection of a Garibaldi Memorial Hospital, at Clifton, S. I., where he used to live.

PRELIMINARY NOTES OF AUTOPSY HELD UPON THE BODY OF CHARLES J. GUITEAU.

To the Editor of The Medical Record.

Sir: As requested by you, we enclose preliminary notes of the autopsy held upon the body of Guiteau. The examination was made under the direction of Dr. Lamb, U.S.A., to whose courtesy we are indebted. Each physician present was left at liberty to make his own notes and observations. Those enclosed are compiled equally from notes independently taken by us. We were greatly assisted also by Dr. Chas. K. Mills, of Philadelphia.

Dr. Lamb will publish, later, a full report which this does not forestall, but to which it is, as stated, simply preliminary.

Wm. J. Morton, M.D.
Chas. L. Dana, M.D.

New York City, July 5, 1882.

The post-mortem was held about three-quarters of an hour after death.

GENERAL APPEARANCE OF BODY.

The body was still warm; the limbs flaccid. There was no emaciation. The skin had a marked yellowish tinge. There was a slight but wide-spread ecchymosis upon the left side of the face. When the body was first taken down the eyeballs protruded and the lids were open.

A brownish red mark, made by the rope, extended three-fourths of the way around the neck, the knot having evidently slipped from the left side to the back. The mark went just above the thyroid cartilage.

The penis showed that there had been an erection and emission. There was a tight prepuce, with slight adhesions and abundant smegma. There was no mark of a venereal sore.

The eyes.—The pupils were slightly and equally dilated, the vitreous cloudy, and fundus indistinguishable.

Abdominal cavity.—Section through the median line showed considerable deposit of fat. The liver was congested, but otherwise normal. The gall-bladder contained a little bile. The spleen was enlarged. Its weight was fifteen ounces. Its tissue appeared normal. The other abdominal viscera were normal. The bladder contained about five ounces of urine.

Thoracic organs.—In opening the thorax a slight venous effusion was found in the right pectoralis major muscle.

The heart was firm. A soft clot was being formed in the right ventricle. The left ventricle was empty. The heart ceased action in systole. Weight, 10½ ounces. A spot of old inflammation existed on left ventricle near the apex. There was a slight atheroma at the beginning of the aorta. There were a few pleuretic adhesions on each side. The pleural cavities were empty. The lungs were slightly congested. A few small, gray bodies resembling miliary tubercles were found in middle part of the left lung near the outer external surface. Otherwise everything was essentially normal.

The neck.—There was externally a mark, as has been described. Both the sterno-cleido-mastoid muscles were ruptured; also the thyro-hyoid membrane. The hyoid bone was not broken, nor the laryngeal cartilages. There was no fracture or dislocation of the vertebræ.

HEAD, SKULL AND BRAIN.

The appearance of the face and eyes has been described. There was a scar on the scalp an inch long. It was situated above and behind the left temple at about two-thirds the height and an inch in front of the auriculo-bregmatic line. It extended through the scalp, but there was no corresponding mark of any kind upon the skull.

The skull.—The most noticeable asymmetry was a slight flattening of the upper and anterior part of the right parietal bone. The flattening ended sharply at the coronal suture. It included a space about half the size of the palm of the hand. Other points of asymmetry were not sufficiently noticeable to be studied with the means at our command.

The cranial sutures were distinct. There was no visible trace of a frontal suture, the two halves of the frontal bone being thoroughly welded. On the inner surface of the skull the bony prominences were well marked; also the Pacchionian depressions. No abnormalities were discovered. There was a slight prominence corresponding to the flattening of the parietal bone before mentioned.

The thickness of the skull was not measured owing to lack of facilities. An attempt was made to measure its cubic contents but it failed for the same reason. As regards thickness there was no striking abnormality at least.

The relative size of the fossæ could not be accurately determined at the time of autopsy.

Brain membranes.—The dura mater was quite strongly adherent in places to the inner surface of the skull. Near the trunks of the middle meningeal arteries upon each side the membrane was thickened and strongly adherent to the bone, though it could be stripped clean. It was also adherent near the longitudinal sinus in front. There was at these points, probably, a slight chronic pachymeningitis externa. There was no exudation upon the inner surface of the dura anywhere. The cerebral sinuses contained but little blood. There was rather more than the average amount of Pacchionian granulations distributed along the middle part of the upper surface.

The arachnoid.—There were very well-marked milky opacities of the arachnoid extending over the upper convex surface. These opacities were over the fissures only. In some parts they had a somewhat yellowish look.

The subarachnoid space contained no abnormal amount of fluid.

The *pia mater* presented no abnormal appearance. It came off easily from the brain.

The *blood-vessels* of the membranes and brain were not full, and the general appearance of the brain was anæmic.

There was no special examination of the larger vessels.

THE BRAIN.

The *weight* was forty-nine and a half ounces (measured on a grocer's scales).

Its *consistence* appeared to be normal.

Its *specific gravity* could not be obtained owing to lack of facilities.

The *measurement* of its *chords and arcs* could not be obtained for the same reason.

As regards *contour and shape* exact studies could not be made. There was no apparent asymmetry of the two hemispheres.

The *comparative weights* of the cerebra and the other parts could not be obtained.

The *cerebellum* was well covered. The occipital lobes were not noticeably blunt or sharp.

The frontal lobes were peculiarly shaped. Looking at them from in front and above, they presented two protruding points from which the surface sloped away in a concave curve. This pointed apex of the lobes with the concavity of the orbital and beginning of the frontal surface was carefully noted by all of us at the first exposure and removal of the brain.

THE LOBES AND CONVOLUTIONS.

Frontal lobes.—Their peculiar shape has been referred to. As regards size they appeared to be well developed.

THE FRONTAL LOBES—LEFT SIDE.

The *first frontal fissure* was very long. It was broken by a single bridge near the junction of the anterior and middle-thirds. The *secondary fissure* was very marked, so much so that it seemed almost to form an independent primary fissure. The *second frontal fissure* was well defined, but interrupted by four small concealed connecting convolutions. It communicated with the first by a cross fissure. It was not confluent with the præcentral fissure.

The *præcentral fissure* was well defined and not confluent. The convex surface of this lobe, as a whole, was marked with an unusual number of cross and other secondary fissures. It was not of a confluent type, but it showed a marked tendency to the four-convolution type.

The *orbital surface* showed a radiate orbital fissure starting from a single central depression or fissure. There were five radiate fissures from this centre. The olfactory fissure showed nothing peculiar.

THE FRONTAL LOBES—RIGHT SIDE.

The *first frontal fissure* was well defined, non-confluent, except that at its posterior extremity it communicated with a deep cross fissure. The secondary fissure was a typical one. The *second frontal fissure* was well defined and non-confluent.

Præcentral fissure.—(No notes.)

The orbital surface was well fissured. The *orbital fissure* branched off from a small isolated central convolution in seven different rays.

The olfactory fissure was normal.

The right frontal lobe was not of a confluent type nor four-fissured, but had an usual development of secondary fissures, like the left lobe.

THE PARIETAL LOBES—LEFT SIDE.

Fissure of Sylvius.—The distance of its lower end from the apex of the frontal was not measured; nor the angle it formed with a horizontal plane. In both these respects it *appeared* to be normal. There was a partial confluence with the first temporal and also with the fissure of Rolando. From the surface it appeared as if the latter fissure passed directly into the Sylvian. On parting the convolutions, however, a connecting convolution was seen. The fissure seemed to be of average length.

The *anterior branch* was well defined and non-confluent.

The *fissure of Rolando* was well defined and not confluent. The præ- and post-central convolutions as well as the paracentral lobule were large and well developed.

The *retro-central fissure* was well-defined and separated from the interparietal by a small concealed connecting convolution.

THE RIGHT SIDE.

The *fissure of Sylvius.*—There was no confluence, apparent or real, of this fissure.

The *anterior branch.*—(No notes.)

The *fissure of Rolando* was well defined and non-confluent. It extended slightly into the longitudinal fissure, fissuring the paracentral lobule. The central convolutions, as they lay under the depressed parietal bone, were examined with special care. The præcentral convolution was well developed throughout its whole length. The post-central convolution was well developed up to its upper fourth. Here it became narrow and shrunken.

The *paracentral lobule* was quite small. On the left side, *per contra*, this lobule was well developed, while the fissure of Rolando was separated from the longitudinal fissure by a broad convolution. (There was a deficient innervation of the left side of the face.)

The *retro-central fissure* was well defined and confluent with the interparietal.

THE LEFT SIDE.

Island of Reil was well covered. Seven straight fissures and eight convolutions were present.

The *interparietal fissure* began at retro-central and ran a well-defined course, ending in the transverse occipital, from which it was separated, however, by a small convolution. It had no complete confluences.

THE RIGHT SIDE.

The *island of Reil* was well covered and had five straight fissures and six convolutions.

The *intraparietal fissure* began in and was confluent with the retro-central. It was well defined. No abnormal confluences noted.

TEMPERO-SPHENOIDAL LOBES—LEFT SIDE.

The *first temporal fissure* was well defined for depth, but was not so long as usual—not running up to the angular gyrus. It was slightly confluent with the fissure of Sylvius.

The *second temporal fissure* was not especially well defined.

On the basal surface the *inferior temporal fissure* was well defined and not confluent.

The *collateral fissure* was well defined and long, extending to the anterior end of the temporal lobe.

The *fusiform lobule* was smaller on this, the left side, than on the right.

ON THE RIGHT SIDE.

The *first temporal fissure* was well defined and of normal length, with no confluences.

The *second temporal fissure.*—(No notes.)

On the basal surface the *inferior temporal fissure* was normal. It was incompletely confluent with the *collateral fissure*, which was well defined but shorter than that on the left side.

THE OCCIPITAL LOBES.

The *primary fissures* were present in these lobes on both sides and no especial peculiarities were noted.

The *anterior occipital*, or Wernicke's fissure, was present on each side, was well defined and non-confluent.

The *right transverse fissure* was well defined, beginning on the mesal surface and passing out with two small interrupting convolutions.

The *left transverse fissure* was well defined; nothing further noted.

Thus, of the three fissures which combine in apes

to form the ape-fissure, viz., the second temporal, the anterior occipital (Wernicke's), and the transverse occipital, two were only normally defined; the remaining (the temporal) was not strongly marked.

MESAL SURFACE—LEFT SIDE.

The *calloso-marginal fissure* ran its usual course to form the anterior boundary of the præcuneus. It was broken in the last part at the præcuneus by a convolution.

Above this fissure was a secondary fissure, running parallel to it and ending about opposite the first third of the corpus callosum.

ON THE RIGHT SIDE.

The *calloso-marginal fissure* was continued on through the præcuneus to the parieto-occipital fissure, from which it was separated by a small convolution.

The *secondary fissure* upon this side was still more developed than on the left, and ran back to the anterior boundary of the paracentral lobule.

On the whole it would appear (1) that the brain was marked by an unusual number of cross and secondary fissures, especially in the frontal lobes; (2) that it was not of the confluent fissure type; (3) that the convolutions on the two hemispheres were quite asymmetrical.

THE INTERIOR OF THE BRAIN.

The white substance was somewhat whiter than usual, and of normal consistency.

The gray cortex was measured and seemed to be somewhat thinner than usual. Eight or nine measurements in different parts gave a thickness varying between $\frac{1}{8}$ $\frac{1}{9}$ $\frac{1}{12}$ $\frac{1}{16}$ of an inch.

The *ventricles* were dry, the ependyma normal, the choroid plexus showed nothing noticeable. No spots of hemorrhage or softening were found, and no tumor was present.

THE CEREBELLUM.

Nothing peculiar was noted regarding this portion of the brain.

The brain was finally cut into various pieces.

Portions were distributed for microscopic examination.

Medical Items and News.

DEATH OF PROFESSOR JAMES SPENCE.—Professor Spence, F.R.S., F.R.C., etc., of Edinburgh, died in that city on June 6, 1882, in the 70th year of his age. He was Professor of Surgery in the University of Edinburgh, Surgeon to the Royal Infirmary, and late President of the Edinburgh Royal College of Surgeons. He became a Licentiate of the Royal College of Surgeons at Edinburgh in 1832, and a Fellow in 1849. He was at different times Lecturer on Surgery at the Surgical Hall, on Clinical Surgery at the Edinburgh Royal Infirmary, Surgeon to the Royal Dispensary and Lock Hospital, Consulting Surgeon to the Royal Hospital for Sick Children, and a member of the Harveian and other societies. He was appointed Professor of Surgery in the University of Edinburgh in 1864, and in 1865 Surgeon in Ordinary to the Queen in Scotland in place of the late Dr. David Maclagan. He contributed several papers on professional subjects to the Edinburgh *Medical Journal*, and published, in 1871, "Lectures on Surgery," in two volumes.

FORCIBLE ALIMENTATION IN PHTHISIS.—Wide circulation and some very injudicious comment is being given to Debove's method of feeding phthisical patients with a tube except in very rare cases. It is impossible that such a measure should have any utility outside of well-drilled and submissive hospital patients. Few foods are more nauseating than a tube thrust down the throat. The nose is perhaps saved but the vomiting is doubly excited in the pharynx and in the stomach.

THERAPEUTICAL NOTES.—Iridin is a possible preventive of the formation of gall-stones.

Tincture of tayuya, a Brazilian plant, is reported from Italy as an efficient anti-syphilitic. The dose is from six to sixty drops.

Wood betony (Betonica), a revived remedy, is the latest addition to the anti-alcoholic drugs.

The sugared *milk of papaine* injected into parasitic tumors has been found to resolve them.

Arsenic will often cure cases of pernicious anæmia where iron fails.

Hydrarg. bichlor. in small continuous doses causes an increase of weight in healthy persons.

Fuchsine (gr. ss. in pill), twice daily, acts wonderfully well in albuminuria, especially where there are contracted kidneys.

Hypodermic injection of cold water over the epigastrium has been found curative of phthisical and of nervous vomiting.

In asthma Dr. Murrell found drachm doses of *resorcin* in milk curative, but it is apt to cause symptoms similar to carbolic acid poisoning.

M. Vidal in *non-puerperal peritonitis*, and in broncho-pneumonia of infants, has found excellent results from flannel compresses, saturated with turpentine, and covered with oiled silk. In an hour vesication occurs, with rise of pulse and increase of strength.—*Australian Medical Journal.*

EFFECT ON WOMEN OF IMPERFECT SEXUAL HYGIENE.—Dr. Chas. Fayette Taylor *(American Jour. of Obstet. and Diseases of Women and Children)* argues that many of the invalids among the unmarried women, especially those of the highest and most refined class, have been ruined in health, and often in mind, by *disuse* of the sexual organs. He states that in many instances the subjects are entirely ignorant of the cause and even of the nature of the erotic sensations—all such ideas and influences having been, by education and training, methodically repressed from infancy. Many form the habit of masturbation, and are thus undermined in health.

CENTRAL PULMONARY ABSCESS MISTAKEN FOR A CASE OF EMPYEMA.—The *Lancet* for April 15, 1882, contains a case of pulmonary abscess reported by Dr. Henry Payne, M.R.C.S., which the author regards, in accordance with modern authorities (Ziemssen and Reynolds) as one of those rare instances where abscess is a sequel to chronic pneumonia. The patient, a male, twenty-three years of age, was admitted into the Ashton-under-Lyne Infirmary exhibiting marked signs of pleurisy with effusion. Ordinary routine treatment was instituted and kept up for a month, when an examination revealed great emaciation; bulging of the left chest wall with an increase in measurement by an inch, as compared with the right; complete dulness on percussion, both front and rear; absence of vocal fremitus and vocal resonance, and also of the breath sounds. Over the right lung the breathing was exaggerated. There was a double aortic murmur but no apex

beat. Slight cough and elevated temperature toward evening. The hypodermic needle detected pus. An operation, to relieve an empyema, was advised, and an opening, two inches long, was made under antiseptic precautions, into what was supposed to be the pleural sac. Severe hemorrhage, with about fifteen ounces of pus, followed. Immediate relief was afforded, and for some five or six days the patient did well, when his temperature suddenly reached 103.4 F., and he died. An autopsy disclosed the following facts: Absence of any pleural sac whatever on the left side; an opening externally leading directly into an irregular cavity in the centre of the left lung, which was in the gray stage of hepatization. Right lung healthy.

The author cites Trousseau, who, during the first twenty-five years of his hospital experience, never found a single instance of a purely inflammatory (*i. e.* non-metastatic non-tuberculous) abscess following chronic pneumonia. Laennec, also quoted, found only five in several hundred autopsies.

CHRONIC URTICARIA WITH INTENSE ITCHING CURED BY JABORANDI.—Dr. C. L. Dana relates the history of a case (*Journal of Nervous and Mental Diseases*) in which an obstinate urticaria was permanently relieved by small doses of jaborandi.

The patient, a shop-girl, aged twenty-one, had suffered from chronic urticaria, with the most troublesome pruritus, for two winters. She was a healthy girl except for occasional attacks of malaria. Suffered also from constipation.

She would have occasional attacks of intense congestion of the face, often obliging her to lie down. At night the symptoms of urticaria were the worst. The legs and arms became very red, and wheals appeared. Patient suffered intensely from the itching.

The first winter she was treated with ordinary remedies with little success. Baths, laxatives, and carbolic ointment did the most good. The skin being noticeably dry and harsh, and patient saying that she rarely perspired, it was thought that deficient action of the sweat-glands might be the cause, in part, of the peripheral irritation. She was put upon ext. jaborandi fluid, ℥. v., t. i. d., with almost immediate relief. Two months later she returned, saying she had been free from urticaria and pruritis, but that when she left off the jaborandi it returned. She felt perfectly well. The dose given made the skin slightly moist, but caused no other symptom.

HEROIC TREATMENT IN DIPHTHERIA.—Dr. Justin Hayes, of 167 Wabash Avenue, Chicago, writes, referring to an editorial discussion of the treatment of diphtheria:

"I am rejoiced that you have ignored and placed beyond discussion the expectant treatment in diphtheria. It should be as heroic as the treatment for venomous snake-bites, congestive chills, or cholera. When this is done there is no doubt about the success if the treatment is commenced in proper time—before the collapsed stage occurs, and then some cases may be saved."

Dr. Hayes states, that thirty-seven years ago, when a medical student at Slatersville, O., a malignant epidemic of diphtheria appeared there. His preceptor, in the treatment of his first cases, bled them, gave them alterative doses of mercury and depletants. His patients died in from thirty-six hours to four days. He changed his treatment to a tonic, antiseptic, sudorific, and stimulating treatment. With this they all recovered and were out of danger in about the same time the others died. Acting upon suggestions received then, modified by later experience, Dr. Hayes adopted a treatment which he has employed with success for many years. It consists in a very steady supply of powders (containing quinine, potas. chlorat., and piperin), cordial (containing camphor, chloroform, lavender, etc.), tincture of iron with a gargle of potas. chlorat., tinct. capsici, cardamon co., and camphor water. When the stomach can not retain medicine, it is given by enema and rubbed into the neck and chest.

A NEW REMEDY FOR INTERMITTENT FEVER.—Dr. R. Reiche calls attention (*Wiener Medizinische Zeit.*), to the value of the *flores siliginis* in intermittent fever. In Hungary, the blossoms are used as an abortifacient.

IPECAC IN ASTHMA.—Dr. Ide reports (*Allgemeine Medicin Central-Zeitung*) a case of asthma in a young woman, aged twenty-one. She has suffered since childhood, a good deal of bronchial catarrh being present. The case rapidly improved under small doses of tr. ipecac. The medicine was then left off for fourteen days, when the symptoms returned mildly. They disappeared again on resuming the medicine.

CEREBRO-SPINAL MENINGITIS IN THE NEW-BORN.—M. le Dr. Bambas has communicated (*Progrès Medicale*) to the Medical Society of Athens, an interesting case of epidemic cerebro-spinal meningitis occurring in the new-born. The mother died of the disease a few hours after the birth of the child. The disease attacked on the same day the infant, which quickly succumbed.

LEGISLATING AGAINST OPIUM DENS.—The State Legislature has passed the following law: "Every person who opens or maintains, to be resorted to by other persons, any place where opium, or any of its preparations, is sold or given away, to be smoked at such place; and any person who at such place sells or gives away any opium, or its said preparations, to be there smoked or otherwise used, and any person who visits or resorts to any such place for the purpose of smoking opium or its said preparations, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding $500, or by imprisonment in the penitentiary not exceeding three months, or by both such fine and imprisonment.

A NEW HOSPITAL.—A plan has been filed in the Building Department for the erection of a hospital building for the Sisters of Charity, on the south side of West Twelfth Street, eighty-two feet east of Seventh Avenue. The building will be four stories and basement high, and will cost $150,000.

IODOFORM IN DIABETES is an effective remedy in large doses, according to Prof. Jac. Moleschott, of Rome (*Wiener Medizin. Wochenschr.*). Moleschott's formula is:

Iodoform	1.0	grammes.
Ext. lactuc. sat.	1.0	"
Cumurin	0.1	"

Div. in pil. No. XX. Sig., j. to iv. pills twice to four times a day.

The cumurin, an anhydride of cumaric acid, $C_9H_6O_2$, is claimed to disguise the odor best of anything.

THE GERMAN CONGRESS OF SURGEONS met at Berlin May 30th, under the Presidency of Professor Langenbeck.

Original Communications.

ON SOME NEW METHODS OF TREATING HYDROCELE.

By ROBERT F. WEIR, M.D.,

ATTENDING SURGEON TO BELLEVUE AND NEW YORK HOSPITALS.

The usual method of treating hydrocele is by the injection of tincture of iodine into the sac of the tunica vaginalis, as suggested by Sir Ronald Martin, in 1832. This method is a very safe and, speaking generally, a successful one. Certainly it has met with the approval of the profession more than any of the other methods of injection, such as of alcohol, of port wine, sulphate of zinc, etc., and possesses advantages in regard to the small amount of inflammatory action, over the use of setons, of cutting into the hydrocele, or of removing a portion of the wall of the sac. Nevertheless, it is followed by quite a number of failures,[1] especially where the weakened tincture of iodine has been used, or where the surplus tincture has been allowed to flow out through the canula, as is advised by some of the British surgeons. Mr. Samuel Osborn, in a little work on hydrocele, published in 1878, found that, in fifty-four cases of the affection, treated by tapping and injection, eighteen had recurrence of the trouble. My own failures have not attained such high proportions as this, a circumstance perhaps due to the fact, that not only was one to two drachms of the ordinary tincture of iodine thrown into the sac of the tunica vaginalis and there left, but also, following the suggestions made by my preceptor, the late Dr. Gurdon Buck, the inflamed scrotal tissues were, on the second or third day, rubbed and manipulated quite roughly, in order to intensify the inflammatory action, it being held by this distinguished surgeon, that the injection of iodine failed by reason of too little inflammation.

Upon the advent of Listerism an old method was revived, deprived of the dangers of inflammation by the use of carbolic acid, by Professor Volkmann, of Halle, who reported, in the *Berliner Klinische Wochenschrift*, 1876, seventeen cases of hydrocele, treated by free incision of the sac under antiseptic conditions. The following are the details of the operative proceedings:

"The genitals and inguinal regions are carefully and repeatedly washed with a solution of carbolic acid, and the skin of the pubic and perineal regions is closely shaved. Then, under the carbolic acid spray, the sac of the hydrocele is incised from the region of the external abdominal ring to the most dependent part of the affected side of the scrotum. The exposed and emptied cavity of the tunica vaginalis is next syringed out with a three per cent. solution of carbolic acid, and the edges of this incised membrane are stitched carefully to the corresponding edges of the incised skin by fifteen, twenty, or even more sutures of very thin silk. All bleeding vessels are ligatured by fine carbolized catgut. The antiseptic dressing is applied closely and firmly, so as to maintain the inner surface of the parietal layer of the tunica vaginalis in direct contact with the surface of the corresponding testicle, a small portion of this organ, however, being left exposed between the gaping edges of the incised wound. The prolonged action of the cold carbolic acid spray on the surface of the scrotum during the application of the sutures, and the repeated injection of a cold fluid into the sac of the hydrocele, cause considerable retraction of the dartos, so that this cavity becomes much reduced in size, and its membranes closely surround the testicle. In cases where the sac is very large and lax, and also in cases where there is much fibrous induration and sclerosis, it may be necessary to excise a portion of the tunica vaginalis. The most favorable cases are those in which the extent of the sac is so far reduced by the contraction of the scrotum that a small streak of the testicular surface is left distinctly visible between the edges of the wound. The introduction of a drainage-tube is not always necessary. In some cases, however, where a portion of the tunica vaginalis forms an elongated funnel, with valvular folds on its internal surfaces, a small drainage-tube should be passed as far as the front of the testicle. The blood having been removed from the seat of operation, the scrotum is surrounded by eight or nine strips of antiseptic gauze, and a large piece of gauze, in eight layers, with a corresponding slit in each layer for the passage of the penis, is placed over these. This dressing is closely maintained in its place by a bandage of gauze saturated with carbolic acid. All gaps in the dressing are stopped with portions of salicylized wool, and a large pad of this material is placed in the perineum, between the anus and the scrotum. Absolute antiseptic sealing of the wound is a necessary condition of total occlusion of the sac. On the first change of the dressing, the cavity will be found to be quite occluded, and the wall of the hydrocele-cavity closely adherent to the surface of the testicle."

These seventeen cases were subsequently increased to sixty-nine in a report of Dr. Genzmer in Volkmann's *Klinische Vortrager*, No. 135. In none of these was there any excessive inflammation, and the average duration of the stay of the patient in the hospital was ten days. The tube, if any was used, was removed generally about the fourth day, when the silk sutures were also taken out, and the dressing changed a second time at the end of a week. The wound was then dressed with the salicylized cotton batting inside of a suspension bandage, and the patient discharged.

I can corroborate the satisfactory progress of patients treated by this method. I have now resorted to this procedure some twenty-eight times, and in but two instances they have all proceeded as satisfactorily as above indicated by Volkmann. In these two, through error of manipulation on the part of my house surgeon, who performed the operation, there was too much stripping up of the skin from the subjacent tissue and some slight sloughing took place. The dressings were removed on an average about the eighth or tenth day. To promote the final healing of the little linear wound which was then left, a solution of nitrate of silver, five grains to the ounce, was painted daily on the granulations, as has been suggested by one of the German sur-

[1] Erichsen says: "Useful as the iodine injection is, it sometimes fails in producing a radical cure of hydrocele," and again, "it is by no means improbable that the success of the iodine injection in this country might not prove to be quite so great as is generally believed." —(Syst. of Surgery.)

Curling says: "Iodine injection is not capable of effecting a cure in every case." He also admits the painfulness of the injection which is quite frequently encountered, and suggests the use of an anæsthetic. —(Diseases of Testes.)

Agnew believes that the failures, when they occur, are due to the wrong use of the injection. The undiluted tincture of iodine should be thrown in and allowed to remain.—(Princ. and Pract. of Surgery, vol. ii.)

geons. This method has also been used with satisfaction in two cases of hæmatocele.

On reasoning out this process it is evident that after the evacuation of the fluid of the hydrocele, the flushing of the serous membrane by a solution of carbolic acid, the drainage-tube and the antiseptic dressing are the essentials of the operation. Now, in the hope of avoiding an extensive incision, I subsequently modified this procedure of Volkmann in the following way: the hydrocele was evacuated by a large size trocar and through the canula, held *in situ*, a solution of one to fifteen carbolic solution (adding a small quantity of glycerine to perfect the solution of carbolic acid) was injected so as to wash out the cavity thoroughly. A small, rubber drainage-tube was then introduced through the same canula before the latter was finally removed. This was done without ether, but under the antiseptic spray and other precautions. The usual Lister dressing was then applied, carbolized jute being substituted for the salicylated cotton in use in Europe. The drainage-tube was removed on the third, fourth, or fifth day, when the dressing was changed, and at the end of a week the antiseptic precautions were abandoned. My experience embraces some ten[1] cases in which this has been performed with satisfactory results, and in only one was there any inflammatory action, which was due to the patient's persistent disturbance of the antiseptic dressings. Though this plan was an improvement upon Volkmann's operation, it was yet hampered by the necessity of the use of the spray and antiseptic dressings. The fact, however, became patent, by resorting to these injections that they were free from pain, and I was, therefore, prepared to accept a statement that came to my notice in the Philadelphia *Medical Times* of the issue of November 6, 1880, by Dr. R. J. Levis, who advised that hydrocele be treated by the injection of a small quantity of pure carbolic acid into the sac of the tunica vaginalis, a procedure that he stated he had used since 1872. His method is to withdraw the fluid by an ordinary trocar, and then to introduce the long, slender nozzle of a syringe through the canula into the vaginal sac. By this means the carbolic acid is readily thrown into the serous cavity, and there is no danger of its being injected into the cellular tissue of the scrotum. The carbolic crystals are liquefied by slight heat or by the addition of a few drops of glycerine. The amount of carbolic acid which Dr. Levis injects is one-half a fluid drachm, and this is allowed to remain permanently in contact with the tunica vaginalis. The operation, he further states, is almost, if not entirely painless, because of the local anæsthetic action of the carbolic acid. Patients sometimes exclaim at the moment of the introduction, but complain of a sense of numbness, rather than of pain. The pain is certainly much less than where tincture of iodine is employed. Care, however, should be observed to allow no acid to flow upon the surface of the scrotum, for pain and inflammation will follow such contact. Dr. Levis had never seen suppuration or sloughing follow this manner of dealing with hydrocele.

I was led, during the early portion of last winter, to adopt this mode of treatment, and though prepared by my previous experience to believe that the carbolic injections were not very irritating, yet I was most agreeably surprised to find that the strong acid was, in the instances which have come under my notice, absolutely painless, or so very slightly so as to be insignificant. In my services at Bellevue Hospital, as well as in private practice, I have used this injection in thirteen patients, four of whom had double hydrocele, with only one failure. In the male hydrocele both sacs were injected at the same sitting. In this instance there was reaccumulation, and a second injection of the pure carbolic acid, two weeks later, was followed by a cure. In this action I afterward learned how to precipitate, for the fluid, when reformed, will gradually disappear, as after an iodine injection. In a majority of instances there was not such a reaccumulation of fluid, but there was considerable thickening of the whole tunica vaginalis, both parietal and visceral. This thickening will last three or four weeks, sometimes longer. Patients are at no time incapacitated from attending to their usual vocations, though Levis speaks of their being detained a day at most from such. In every instance the urine was carefully tested for three or four days subsequent to the operation, in order to determine whether or not there had been absorption of carbolic acid. None was observed in any case. The quantity injected was one-half to one and one-half drachm.

I feel warranted, therefore, from this experience, in corroborating the favorable judgment passed upon this method of treatment by its promulgator, Dr. Levis, and in presenting it as a procedure safe and painless, and, so far as my limited number of cases go, effectual in its results.

No. 37 West Thirty-third Street.

[1] Six of these have been already reported in the N. Y. Medical Journal, December, 1880, p. 631.

THE VACCINATION QUESTION.[1]

By P. C. BARKER, M.D.,

MORRISTOWN, N. J.

When we review the history of medicine during the past fifty years, especially when we contrast the present state of medical knowledge with that which obtained early in this century, it seems remarkable that so little has been added to what Jenner knew and taught us of the value of vaccination as a prophylactic against the ravages of small-pox.

It has been the hope of each generation, since his day, that our profession would so successfully oppose this great scourge of former times that variola would become a thing of the past; and it behooves us, at the present time, to pause and consider why it is that vaccination has not fulfilled this ardent and reasonable hope. Jenner closed his third memoir as follows: "May I not congratulate my country and society at large on their beholding, in the mild form of cow-pox, an antidote that is capable of expelling from the earth a disease which is every hour devouring its victims, a disease that has ever been considered as the severest scourge of the human race?" Seventy-eight years later John Simon, medical officer of the Privy Council, testified as follows concerning it:

"The belief which governs the vaccination system of this country (that properly performed infantine vaccination, duly renewed at puberty, will virtually extinguish small-pox as a fatal disease among such populations as have recourse to it) has rested on so vast a basis of well-established facts as not to have needed, for scientific completeness, that any further facts should corroborate it."

[1] Read before the New Jersey State Medical Society, May 24, 1882.

This belief has been universal for many years among those who were competent to form any opinion on the subject; and yet, neither in England nor in this country, has there ever been a prolonged period without its epidemic of small-pox, nor has there ever been a time during all these years when vaccination of some kind, performed in some way, has not been generally practised as a professional duty. In selecting this subject for your consideration, I have been influenced by a strong conviction that the public ought to be better protected by vaccination against small-pox than it is now or ever has been; by the hope that I may be able to point out some errors which have attended its performance in the past, and to indicate how we can so amend our vaccination system and practice as to "virtually extinguish small-pox as a fatal disease."

It is extremely doubtful if the public in this country is now as well protected against the spread of this disease, even in large cities, where boards of health furnish gratuitous vaccination to all comers, as it was fifteen years since without them. This statement does not rest upon the assumption that our boards of health are useless, nor that they have neglected to perform primary vaccination, or revaccination, but is based upon other considerations, which will appear in due time as we proceed.

Jenner named this bovine disease "variolæ vaccinæ," or small-pox in the cow. We have no better name to bestow upon it to-day. Experiment has demonstrated that the cow may be so variolated that genuine vaccinia will result, and the microscope testifies in favor of the essential identity of variola and vaccinia.

Jenner was well aware of the fact that primary vaccination could not be expected to last a lifetime, and cited cases in proof. In one of them (Case IX.) W—— Smith, first contracted kine-pox in 1780, caught it again in 1791, and the third time in 1794. Jenner did not consider that Smith's continued susceptibility to vaccinia was proof that he would probably have contracted small-pox. Indeed he expressed a doubt, and gave a case to illustrate the proposition, that a person might be susceptible to vaccinia and at the same time insusceptible to small-pox. A girl who had kine-pox in 1759, was ineffectually inoculated in 1797, and got vaccinia again from the natural source in 1798.

Jenner described the severe effects which often follow the use of lymph from a spontaneous vesicle, and contrasted them with the milder, more uniform and therefore the more reliable results obtained by using humanized lymph. These considerations, added to the conviction that the latter was just as "efficient" as the former, finally decided the question in Jenner's mind in favor of arm-to-arm vaccination. For about seventy years the world used lymph which had mostly descended directly from Jenner's stock. In this country, Dr. Valentine Seaman, of New York, and Dr. Waterhouse, of Boston, both procured lymph from Jenner in 1800; and it is probable that the lymph in general use in this country during all the years that intervened between that period and the introduction of the French bovine stock, was derived from these two sources.

It seems to be supposed by some writers on vaccination that Jenner did not think it necessary to introduce lymph at more than one place, but he makes no such statement in any of his writings, and we have evidence to show that he did not consider one insertion sufficient. Among the illustrations in his memoir, there was a child's arm showing a group of three vesicles, beautifully drawn and colored, and strikingly true to nature. Further corroborative evidence is found in the fact that it was for many years common practice in England to make three and even more insertions. Indeed it was to improve upon this very practice that Mr. Bryce suggested his method.

Bryce was the first to introduce vaccination into Scotland. In 1802 he published the details of a modified form of vaccination which he claimed would afford better protection than the one in general use. He expressed his reasons for employing his method as follows: "Inattention to this circumstance, viz., that the action of the virus of cow-pox may be often merely local, has been a fruitful source of error and disappointment in conducting the new inoculation." In another place he says: "If on the one hand we judge that the cow-pox affection has been complete when it has been only local, the person will be left exposed to all the horrors of the natural small-pox, which a false judgment given, of absolute security from the disease, had taught him to despise. And if, on the other hand, we judge that the cow-pox affection has been merely local, when it has in reality been general, we are induced to repeat the inoculation again and again; and, as the appearance of each of these re-inoculations will vary and a regular vesicle nor fever ever be produced, the same uncertainty will remain, until at length the inoculation for small-pox itself comes necessarily to be performed." To obviate all "uncertainty of action" his plan was as follows: Several days after a primary single insertion had been made, as soon as any activity was manifested, he introduced the second. A few days later, if the second showed any indications of succeeding, he repeated it a third time, and so on until they came to nothing. The peculiarity of this method consists in the fact that as many of the insertions as come to anything at all mature "consentaneously," the later ones overtaking the first.

The opinion has already been expressed that vaccination as practised many years ago afforded more complete protection than it does now; and I will add, than it has done at any time since 1869.

Going back to the old records we find that, from 1750 to 1800, before vaccination came into use, 9.6 per cent. of mortality from all diseases in London was due to small-pox.

From	1810	to	1820	it was reduced to	3.2	per cent.
"	1830	"	1840	" " "	2.3	"
"	1840	"	1850	" " "	1.8	"
"	1850	"	1860	" " "	1.2	"

Taking the death-rate of small-pox alone for the London epidemic of 1818 to 1823, only one in every 330 vaccinated people died, while in the epidemic of 1876–79 one in 28 died. This includes people who had been vaccinated in any way, or who said they had; and shows that many more people were savingly protected in 1820 than in 1876.

W. F. Jebb, clerk of the Metropolitan Asylum, of London, reported that, from the autumn of 1876 to October 31, 1879, 15,171 cases of small-pox were treated in the various hospitals of London. Of these, 11,412 had been vaccinated, and 3,759 had not. Out of the whole number of cases, 2,677 died. Of the vaccinated there were 1,008, and of the unvaccinated 1,669.

The report of Dr. Buchanan, for the year ending May 25, 1881, gives a total of 1,532 fatal cases. He calculated that there were in London 190,000 unvaccinated persons, 105,000 being under twenty

years of age, and 41,000 under five years of age. One inspector, going from house to house, reported that, out of a total of 6,018 children, he found 828 unvaccinated.

England has been more or less under the influence of compulsory law since 1854, and there have always been men like Ceely and Marson and Seaton and Simon, and many other advocates of thorough vaccination, who have earnestly endeavored to secure the best and most efficient system and organization for its due performance; and yet there are still large numbers of people in England who are entirely unprotected by vaccination, and, what is still worse, statistics show that, among those who are supposed to be efficiently vaccinated, there is a considerable percentage of fatal cases of small-pox.

In the United Kingdom there are six hundred and forty-seven "Boards of Guardians," as they are called. Under these various boards are nearly four thousand practitioners who act as public vaccinators. About seventy per cent. of all vaccinations is performed by them. The fault, therefore, does not lie in the imperfection of the machinery, but in the details of its operation; as well as in other causes which have thus far seemed to be unavoidable, being due to the ignorance, heedlessness, and blind opposition to vaccination that characterize the population of the worst quarters of all large cities. It is a well-known fact that most epidemics have their origin in and spread from these centres of contagion.

These obstacles to the successful suppression of small-pox are important, and demand serious consideration; but they are not the only causes of failure, nor are they the ones which most affect us as sanitarians. As Mr. Simon wisely says, "No principle can be more obvious than this: that if the State professes to vaccinate the people, above all if it compels the people to be vaccinated, it must take every possible security for the excellence of the vaccination which it offers." . . . "What has to be administered is not a mechanical matter of routine and registration; but a system which, from beginning to end, and from centre to circumference, requires *in all its parts to be vitalized by the science of medicine.*" (The italics are my own.)

Complaints have been made in English medical journals from time to time, for many years past, that primary vaccination had been performed without due regard to the quality of the virus, or the number of insertions necessary to insure its full protective power. Marson, of the London Small-pox Hospital, during thirty years' experience, had under his observation more than 15,000 cases of variola, which were carefully studied, classified, and recorded. He found a marked and definite relation between the number and character of the cicatrices and the number of cases that occurred among the vaccinated. Of the latter there were, having one vaccine cicatrix, 7.73 per cent.; having two vaccine cicatrices, 4.70 per cent.; having three vaccine cicatrices, 1.95 per cent.; having four or more vaccine cicatrices, 0.55 per cent. Of all these, again, there were, having well-marked cicatrices, 2.52 per cent.; having badly marked cicatrices, 8.82 per cent. There was another point of interest and importance, in connection with the cases having but one cicatrix, showing the difference in protective power between a good and a poor one. Where the cicatrices were of good size and well foveated, the death-rate was only 3.83 per centum; while among the small or indistinctly marked cicatrices, the rate was 11.91 per centum. It should be remembered that these cases were all primary vaccinations, except nineteen who had previously had small-pox.

Small-pox records have not been kept in this country, either long enough or with sufficient detail and precision, to serve as data for such an investigation as the present, and it will be observed that I have drawn mostly from English sources. Great Britain has the advantage of us in another respect, namely, in having compulsory laws and a vaccination system; and it is highly probable that vaccination is more generally practised in the rural districts and small towns of England than in corresponding communities in this country; but that is not saying that the English people, who are vaccinated, are any more perfectly protected than are our own people; nor do I think that such is the fact, for revaccination is probably more generally practised here than it is in England. So far as our statistics enable one to compare the general results of vaccination, in the two countries, there seems to be little advantage on either side.

The fact is that, neither in England nor in this country, is vaccination "vitalized by the science of medicine." With most practitioners in this country it is a disagreeable duty which must be performed. Consequently, it is attended to in a perfunctory manner, often with lymph procured at any stage of development of the vesicle; and then it is forgotten or, at least, left to run its course unwatched. No other duty devolving upon the physician is of more importance to the welfare of the community; and no other minor operation in these days of Listerism is left to the chance of septic or other untoward influences.

Reference has been made to the difficulty of inducing the ignorant parents, of children born in large cities, to have vaccination performed. The health authorities in our cities have always had to contend against this prejudice. In Brooklyn, during the years 1870 and 1871, there were 1,068 cases of small-pox, with 408 deaths. Of these, 69 per cent. occurred in unvaccinated children under two years of age, although there was a regular corps of public vaccinators, who had been from house to house, in their respective districts, and vaccinated every child whose parents would permit it. They met with stubborn resistance in the worst wards, and succeeded only, by patient explanation of the value of vaccination, and by carefully looking after those who had been vaccinated to see that it ran its course kindly. By this means a better state of feeling was sometimes established, and the vaccinator was asked to vaccinate children in houses from which he had previously been repulsed.

The New York Board of Health inaugurated house-to-house visitation in 1869, with a corps of sixty physicians. Their system has been in constant operation ever since, and they have taken great pains to vaccinate every infant and unprotected person; and yet, during the year ending March 20, 1872, there were 337 cases of variola in children under five years of age, and 113 of these exhibited indications of previous vaccination.

Through the kindness of Dr. J. B. Taylor, of the New York Health Department, I am able to add the following statistics for the year 1881: During the year there were 1,342 cases of small-pox in New York City; of these, 799, or 59.5 per cent., had been vaccinated, while 543, or 40.5 per cent., had not. There were 404 deaths, 137, or 33.9 per cent., had been vaccinated, and 267, or 66.1 per cent., were unvaccinated. There were in all 490 children under

fourteen years of age. Between eight and fourteen years there were 79; and under eight there were 411, or nearly 84 per cent. of the whole number of children. Only 16 of the 411 had been vaccinated, while 393 had not. Among those whose ages ranged between eight and fourteen, 48 had been vaccinated, and 31 had not.

These 424 cases of unvaccinated children who contracted small-pox in New York City last year, illustrate the failure and danger of the persuasive system of vaccination; just as the 66 cases which occurred in vaccinated children show certain other defects which will appear further on. It should be added in this connection, that none of the vaccinated children died.

Among the whole number of vaccinations performed during the year there were 148 complaints of bad results following the use of the bovine lymph. Of these, 38 gave trouble in healing, and there were 19 abscesses.

Disappointed in the fact that vaccination had failed to prevent recurrences of epidemic small-pox, and fearful lest other diseases than vaccinia might be communicated by humanized lymph, certain members of the profession many years ago began to advocate the adoption of retrovaccination, and of bovine cultivation of lymph. At the Medical Congress held at Lyons in 1865, Palasciano, of Naples, announced that he had for some time been vaccinating with bovine stock which he propagated from calf to calf. Lanoix, of Paris, was much impressed by his statements, and went to Italy to study this calf culture of lymph. Upon his return to Paris he took a vaccinated calf with him and opened an establishment. About the same time a spontaneous case of cow-pox was discovered at Beaugency, near Orleans. Within a period of fifteen months 9,319 vaccinations and revaccinations were performed with Lanoix's stock. Of the former about fifty per cent., and of the latter sixteen to seventeen per cent., were successful. The incubation stage varied (in children) from five to twelve days.

These results were carefully watched by the two factions in Paris, one headed by Depaul, the ardent champion of bovine lymph, and the other by Guérin, who adhered with equal fervency to the old stock of humanized Jennerian lymph. Bitter and noisy was the wordy contest in the Academy of Medicine between these opposing parties. Depaul and his ideas finally carried the day, and bovine virus gradually came into general and almost universal use, not only in France but throughout the civilized world.

Notwithstanding the claims of the propagators of and dealers in bovine lymph to the contrary, I believe that no better results can be shown to have followed its use in this country than those obtained by M. Husson with Lanoix's lymph, in Paris, as quoted above.

It is not denied by any of the advocates of bovine stock that a certain proportion of the vesicles yield inert lymph.

Moreover, the character and development even of a genuine bovine vesicle duly charged with corpuscles, is quite different from one produced by humanized lymph, during its whole course. Ignoring for the present the increased amount of local disturbance usually manifested by the former, the annular elevation of the lymph-cells is less, the cells are more likely to be broken, and the bovine crust is lighter in color, thinner, and more friable. A good humanized crust is of a rich brown color; semi-translucent when held up to the light; and its thickness, according to Dr. Loines, should be nearly one-third of its diameter.

If we compare the reliability of the two kinds of lymph, as indicated by the ratio of success attending the first trial, still greater differences will be found. From 1856 to 1866, in London, about seventy per centum of all infants were vaccinated, and of these 98.9 per cent. were successful on first trial. Dr. Seaton reported that 446 points of Jennerian virus were obtained from the National Vaccine Institution and were distributed to five different vaccination stations. Of these 443 produced typical and perfect vesicles. The best results of the vaccination corps of the city of New York, in 1869 and 1870, was about ninety-eight per cent. of success on first trial. In Philadelphia, in 1869, 41,444 were vaccinated by public vaccinators, with a failure of only 1.25 per cent. on first trial.

In Brooklyn, during the years 1870 and 1871, some of the most experienced of the corps had only one failure in every 243 vaccinations.

There has been much talk during several years past in certain quarters about "pure animal virus;" and it is a significant fact that every one of the thirteen propagators in this country claims that he alone has it. As a matter of fact, I believe that there is not more than one among them all whose stock has continuously descended from calf to calf without admixture with some other stock; or that has not been more or less times cultivated in the human circulation since it was derived from its natural source. One of these dealers procured his stock from a case of spontaneous cow-pox, discovered in New York State in 1874, and he claims that he has himself cultivated it in the calf ever since.

Viewed in the light shed upon contagious diseases by the "germ theory,"[1] and especially by the

[1] The germ theory of disease has opened a new and important field of research analogous to vaccination, which it is hoped may yet result in additional triumphs for preventive medicine against other contagious diseases of mankind, as it already has in certain diseases of fowls and domestic animals. Pasteur's experiments in fermentation and putrefaction led to the discovery (in 1850) of the "bacillus anthracis" in splenic fever. Dr. Sanderson discovered, by experiments made in 1878, that the "bacillus" became so modified, by being propagated in the guinea-pig, that its introduction into the circulation of the cow, although followed by severe results did not prove fatal.

Pasteur here took up this line of investigation and succeeded in so modifying the virulency of the "bacillus" by repeated cultivation in chicken-broth, that its introduction into the circulation of the sheep was not followed by any severe effects, although his source of supply was the blood of a sheep that had died of splenic fever. Carrying the investigation still further, he found, by applying the *experimentum crucis* that these animals were not only protected against ordinary exposure, but that they were not disturbed by inoculation with the blood of an animal that had died of the disease. Other sheep, unprotected by "vaccination," as Pasteur calls it, which were inoculated with the same blood, died in fifty hours.

Animals worth four millions of dollars die annually of splenic fever in France. The authorities are vaccinating large numbers of sheep, as well as horses and cattle, with the cultivated "bacillus;" as many as twenty thousand sheep have been vaccinated in a period of fifteen days in the departments contignous to Paris alone; and the practice is becoming general throughout France.

The germ theory of disease assumes that all zymotic, contagious, and infectious diseases are propagated by what Beale has termed "*bioplasms*," which are minute living cells of animal origin; and which, perhaps, at some antecedent period may have been perfectly healthy.

It also assumes that neither "bacteria," nor "microzymes," nor "fungi," nor any other kindred form of life is concerned in the propagation or dispersion of any of the contagious diseases in man; and Beale includes animals. Pasteur's more recent experiments go to show that the latter statement may be taken with some reservation, as "bacteria" which are found in some of the infectious diseases of animals seem to be something more than a mere envelope for a bioplasm.

Applying the germ theory to our subject, we find that, if lymph be taken from a recent small-pox vesicle and examined with a $^1/_{25}$ inch objective (magnifying from 1200 to 1800 diameters), numerous clusters of spherical or ovoid bodies are seen, each having a distinct nucleus, a pale blue color, and the power of motion and division. These cells are the "*variolic bioplasts*," and in them resides the *contagium* of small-pox.

If lymph from a vaccine vesicle is taken at an early period in its de-

light which Pasteur's experiments have thrown upon the cultivation of disease-germs, we are at last in a position where we can formulate some scientific deductions. For instance, we would be justified in assuming, if we did not know, that the use of lymph direct from the natural source would be likely to be followed by more severe constitutional as well as local effects, than subsequent repetitions would produce. We are also justified in assuming that, as the "variolic bioplasm" has undergone no diminution of virulency by long transmission through successive generations of men; and as the "bacillus" can be indefinitely cultivated without any deterioration of protective power, so it is reasonable to suppose that the "vaccinad" will maintain its integrity and activity, if properly cultivated, even through indefinite generations of humanizations.

Nor is it difficult to believe that its protective power did continue for a period of seventy years, when we review the evidence which recorded observation has placed within our reach.

The report of the London Metropolitan Hospital, for 1879, stated that no case of small-pox had ever been observed by any of the superintendents of that hospital in any person "who had been efficiently vaccinated and successfully revaccinated." Moreover, there were but six cases in forty years out of over one thousand nurses and servants employed in the institution who had been affected in any way, and every one of these had in one way or another escaped revaccination before entering the wards. These persons had been vaccinated with lymph, many times removed from the original source, and it is evident that its protective power was unabated. Curschmann examined over one thousand cases of small-pox, and not one of them presented evidence of efficient vaccination. Dr. Loines, of the Eastern Dispensary, in New York City, performed 110,000 primary vaccinations in seventeen years. About 20,000 of these were opened and furnished over 400,000 quills. His revaccinations amounted to something over 90,000, and he never knew of a case of small-pox in any person he had pronounced well vaccinated. He made four insertions in a group, and inspected the arms on the eighth day (day week), and after the fourth week he examined the cicatrices. If satisfied, he gave the parents of the child a certificate. Dr. Ward, of London, was a vaccinator for more than forty years, and vaccinated about 48,000 people. None of these cases were known to have died of small-pox, although not 3,000 were revaccinated. For nearly forty years vaccination has been compulsory in the armies of Prussia, Wirtemburg, Denmark, and Sweden, with the result of almost completely extinguishing small-pox even in sporadic form from their ranks. With such evidence before us it is useless to claim that the Jennerian lymph, used in these cases at least, had suffered any kind of deterioration whatever, notwithstanding the probability that some of it was more than three thousand removes from the original bovine source.

There is no good evidence that this Jennerian stock had lost any of its inherent potential energy through all those years; and even if there were, I submit that the stock might have been renewed from the natural source from time to time, without changing the method of cultivation. In my opinion the substitution of this untried (bovine) method for an old and well proven one, was both unwise and unscientific; and I further maintain that events have demonstrated the fact.

The claims of the "syphilophobists," too, have proven to be equally unfounded. There is no good evidence that syphilis or any kindred disease was ever communicated in lymph, nor even that vaccinia and syphilis have been communicated at the same time. Experiments made with chancrous matter and lymph mixed together utterly failed to produce a combined action. Either vaccinia or syphilis resulted, one or the other and nothing else. Professor Sigmund, of Vienna, got nothing but syphilis in his experiments. In Dr. Loines's experience, large as it was, he never saw syphilis communicated by vaccination. Nor did Marson in his 40,000 cases, nor Luse in 40,000, nor West in 26,000, nor Sir William Jenner in 13,000 cases; and none of them believed that there is any real danger of communicating syphilis by vaccination.

What, then, I ask, are the special advantages of bovine cultivation, and the use of "pure animal virus?" I know of but one. In times when small-pox is epidemic, large quantities of lymph can be furnished at short notice. On the other hand, let us consider some of the disadvantages attending its use.

First.—Bovine lymph often fails on first trial, even in the hands of the best vaccinators.

Second.—It is irregular and generally tardy in its period of incubation.

Third.—It is often extremely difficult to tell from an inspection of the vesicle whether it is genuine (efficient) or not.

Fourth.—The local effects are, as a rule, severe; so severe in fact that he would be bold indeed who made four insertions in a young infant (as Loines habitually did).

Fifth.—Owing to the depth of its action, and the slough which so often follows its use, even the cicatrix does not afford definite information; as it does not under these circumstances show characteristic foveations. It is a mistake to suppose, as many do, that the extensive induration and redness which is often seen around the (bovine) vesicle is any measure or indication of its efficiency. On the contrary, it is a positive evil, being simply a mild septic inflammation of the skin and subcutaneous tissues produced by degenerated "bioplasts," pus-cells, or other improper material which has been conveyed with the lymph.

velopment and examined with the same high power, numerous clusters of cells, each bearing the same characteristics, will be found in abundance. After the eighth day, however, in both cases, some of the cells seem to have degenerated: and in this condition they resemble the pus cell in appearance, although of course they are very much smaller.

This perfect correspondence between these "*bioplasts*" is presumptive evidence of their identity; but it is not conclusive, for apparently identical "bioplasts" have been discovered as the accompaniments of other contagious diseases: and the fact still remains that neither the microscope, nor chemistry, nor any other known physical test enables us to recognize these cells, or to distinguish one kind from another; but improved methods or appliances in microscopy may yet demonstrate structural differences. Experiments made by Chauveau and others would seem to indicate, beyond any reasonable doubt, that the "*contagium vivum*" resides solely in the living cells, which are found in all the contagious diseases and infectious fluids of men and animals, and that a careful separation of these cells from even the most virulent fluid leaves the remaining portion perfectly innocuous. Chauveau states, in the most positive manner, that there is no question of this fact. He has repeated his experiments many times, and his statements have not been disputed, nor even questioned.

Vaccine lymph consists of serum, which contains, let us assume, the "*variolic bioplasm*" which has been modified by cultivation in the circulation of one of the bovine species.

Our object in vaccinating our patients should be to propagate this "*vaccinad*," as Farr called it, by cultivation in the human system, as a protection against the virulent and contagious "*bioplast*" generated in variola.

This is precisely analogous to vaccination with the "*bacillus anthracis*," except that the latter is, for convenience, cultivated in chicken-broth, instead of the guinea-pig; and, to carry the analogy still further, Pasteur thinks that the protective power is likely to be prolonged. In chicken-cholera, however, the case is different. He has known the protective power of this form of vaccination to be exhausted in one year.

Sixth.—The small lymph capacity of the bovine vesicle is notorious. Twenty quills is a good yield, while as many as eighteen hundred have been taken from a single humanized vesicle. If the vesicle in vaccinia is the analogue of the eruption in the various contagious diseases (and experiments made with lymph administered internally would seem to indicate that it is), this deficiency in development would point to a corresponding loss of protective power.

Seventh.—It is a reasonable deduction that, inasmuch as the "variolic bioplast" is in some way greatly modified by one cultivation in the circulation of the cow, every successive bovine transmission may modify it still more; and that in time its protective power may be lost entirely. Whether this conclusion be true or not, there is no good ground for the idea that long descent is any better for bovine than for humanized lymph; and the ordinary advantages which attend the use of the latter, as compared with the former, are certainly beyond dispute. It is my belief that the lymph in use at the present time, and that has been used for several years past, has less inherent protective energy than the old stock had, and that a careful scrutiny of statistics will satisfy any unprejudiced mind that many young children, with fair evidences of successful primary vaccination, have in recent years had small-pox and died from its effects simply in consequence of the depreciation of the lymph that has been in general use.

Returning once more to our belief in the fact that "properly performed infantine vaccination, duly renewed at puberty, will virtually extinguish small-pox as a fatal disease," we have still to consider the practical side of the question, *what constitutes efficient vaccination, and how can we make it efficient?*

While we are in complete ignorance as to the *modus operandi* of this "bioplasm," or any other in the system, still we do know a few facts concerning the laws that regulate the development and spread of the various contagious eruptive diseases, upon which we are in the habit of depending. Among other things, we know that a very mild case of any of these diseases will not be as likely to protect the subject against a repeated invasion as would a well-marked typical case. We also know that people vary immensely in respect to their susceptibility to contagious diseases of all kinds; and that with some this susceptibility is so marked that they may, and sometimes do, contract contagious disease repeatedly. Experience has shown that a certain amount of this unknown influence must be produced in the economy by vaccination in order to protect the person completely. Again, experience has taught us that one good vesicle may afford ample protection for a lifetime even. It has also demonstrated, as appears in Marson's much quoted tables, that two, three, and even four good vesicles may not afford full protection. In short, it is not the number of vesicles, nor even their perfection, that we are to depend upon, but a reasonable certainty that the system is so saturated with the lymph that it will take no more. This, as I understand it, constitutes efficient vaccination. Anything short of this may be, or it may not be, protective. For these reasons Bryce's method commends itself to us as the best, and worthy of general acceptance and practice. Indeed it is the only method by which the system can be known to have been saturated at any given time, whether by primary vaccination or revaccination.

Of no less importance is the lymph, which should always be taken at an early period, as soon in fact as it will flow from the cells. It is not only more active (reliable) at this time; but it is the only time during the development of the vesicle when it is absolutely free from degenerated corpuscles. Bearing this fact in mind, it follows, as a matter of course, that it should never be preserved in any way except on quills or ivory points which are clean and free from animal matter. Neither cells nor crusts nor capillary tubes, much less those questionable cones, should ever be used except in an emergency. We do not seek to convey either half-decomposed blood, desiccated epithelium, nor dried or other pus-cells; but "vaccinads," and them only, to the arms of our patients. Nor should we perform this important operation and leave the results to such untoward complications as we know by experience may intervene. The child should be carefully watched, especially to ward off any local inflammatory or septic influences. If we are "vitalized by the science of medicine" we will bear these facts in mind, and perform our vaccinations in accordance with them.

This leads me to remark that we would do well to place this whole matter in the hands of the State Board of Health, of the national organization; or of a National Board of Vaccination whose duty it should be to cultivate lymph and appoint public vaccinators, who alone should have the right to vaccinate or revaccinate. Vaccination is not only a science. It is an art! Dr. Taylor, of the New York Board of Health, stated to me that few among their corps became good vaccinators short of a year's experience; and that, while some required much more time, there were always a few who never became expert. Ex-Sanitary Superintendent Segur, of the Brooklyn Board of Health, testified to a similar experience. Nor do I see why vaccination should not be made compulsory, in a modified way, in this country.

In Germany, every child must be vaccinated before it is one year old, and revaccinated before it is thirteen. In the army, revaccination is practised at regular intervals; and with perfect success.

Italy, Austria, Bavaria, Sweden, and Scotland also have more or less compulsory regulations, some of them combining persuasive elements. In Austria the public vaccinator visits every house in his district; and those who refuse to avail themselves of his services are denied every kind of charity, admission to schools; or to hold any office; or to obtain any kind of public favor whatever. In Sweden, after two years' endeavor to induce parents and guardians to vaccinate, if they still resist, the authorities apply fines and other legal penalties. Their system works well. In Scotland, under the act of 1864, all infants are expected to be vaccinated within six months of their birth. If not reported to the Registrar, he sends a reminder. The result has been that small-pox has become almost extinct in the child population of Scotland. For the decade ending December, 1874, 96.18 per centum of all births were successfully vaccinated. With our State system of registration of births, we could easily adopt the practical workings of the Scotch system.

Providence, R. I., has long had a very good system. Their birth statistics are gathered by house-to-house visitation, and children are vaccinated gratuitously every Saturday. During a period of forty years there were a few cases of sporadic small-pox, but in no instance was there a second case.

Much might be urged in favor of compulsory vaccination laws; but I will simply reiterate my belief

that they are both necessary and expedient, and that we should use our best endeavors as members of the State Medical Society, and as individual promoters of sanitary science and preventive medicine, to get such laws enacted in our State at the earliest possible moment.[1]

FEEDING PER RECTUM.

As Illustrated in the Case of the Late President Garfield and Others.

By D. W. BLISS, M.D.,

WASHINGTON, D. C.

I PREFER this expression to those commonly in use (as "rectal alimentation," etc.), not only because it is more terse, but also because it more exactly describes what occurs, as will be seen farther on.

It has long been my desire to lay before the profession, not only the results of my own experience, but also the published accounts of others. The latter first caused me to explore, and afterward test for myself this artificial method of sustaining life. Extraordinary demands upon my time and strength have hitherto prevented any such attempt. The gravity and importance of the subject can scarcely be overestimated, while the history of its employment in both medicine and surgery is more interesting than any romance.

It will surprise many of the profession to learn that there is strong reason for the belief that, not only the history of enemata (*pur. et simp.*), but that of nutrient enemata as well, goes back to the ancient Egyptians, many hundred years before Christ (see Herodotus *Euterpe*, Cary's Transl., Am. Ed., p. 125, N. Y., 1855), from which it appears that they had a custom of using emetics and clysters three days in each month to preserve health ("Med. and Surg. Hist. of the War," part ii., p. 825). The Greek physicians also made great use of clysters in the treatment of fluxes, particularly the "cœliac flux," preferring this method to medication by the mouth. They used wine, whey, milk, ptisan, broth of spelt, and the like. Sometimes they aimed to sheathe the walls of the intestinal canal, and thus protect them against acrid humors descending from above, by injecting oleaginous or gummy substances ("Med. and Surg. Hist. of the War," op. cit.). In many instances these rectal applications not only were, but were intended to be, practically nutrient, in addition to their original use as aperients. If disciples of Hippocrates used the assimilable elements just alluded to, we must admit that rectal feeding has been a plant of very slow growth. Still, its study certainly exhibits one of the most interesting examples of the progress of thought and observation in the art of medicine.

In the narrow limits of this article it is manifestly impossible to give many excerpts from the authorities referred to. A full account of the materials used, of the mechanical means employed in administration, with reports of cases, would fill a large volume. It is therefore necessary to content ourselves with but a meagre outline, appending such references as are both interesting and important.

Probably the earliest form of syringe was that used by the Egyptians, consisting of a pipe with a bladder tied upon one end. The form recommended in the Hippocratic treatise ("De his quæ Uterum non Gerunt," edition Littré, viii., p. 431) differed from this only in having a number of little orifices in the sides of the pipe. From these primitive means resulted our present system, by which a continuous stream may be thrown to almost any point in the large intestine. All are acquainted with the so-called "fountain" syringe,[1] by which a continual drench of the lower bowel may be prolonged at pleasure. Longer pipes than those commonly used have proved valuable in many cases. In one instance (that of a distinguished senator, now dead), I was obliged to frequently introduce the tube of a stomach-pump very nearly the whole length of the transverse colon. There is small difficulty in this operation, save that a little awkward delay may occur at the sigmoid flexure. It is hard to imagine that any further improvement in our present instruments will ever be made or needed.

As to *materials employed*, while almost every article of food, the form of which admitted of injection, has been used—*e.g.*, milk, eggs, beef-broth, etc.—it is probable that the use of finely divided beef with pancreas has been known since the days of Hippocrates. Dr. Brown-Séquard (London *Lancet*, January 26, 1878) says, referring to an article by Dr. Kaufmann (*Deutsche Zeitsch. für prakt. Med.*, No. 44, 1877): "It is essential that the pancreatic gland which is to be used, be from an animal quite recently killed, as the tissues and juice of that gland lose their property very quickly if the temperature of the surrounding air is at all high. It is well to take away the fat and cellular (connective?) tissue, and inject only the meat and glandular tissue, very finely divided and thoroughly mixed." This statement, coming from a most eminent neurologist and pathologist, is interesting, first, because the venerable doctor has followed in his published statements one of the first accepted methods of alimentation *per rectum*; and second, because he evidently believes that pancreatic juice possesses a digestive power only rationally demonstrated by modern physiologists. Dr. Kaufmann, in the above citation, calls attention to the "excellent results obtained by feeding patients with pancreas and meat *per anum* in

[1] I did not contemplate making any allusion to erysipelas as a complication of vaccinia, but the remarkable statements of Dr. C. A. Lindsley, of the Medical Department of Yale College, communicated in a paper published in the last report of the Connecticut State Board of Health, seems to demand consideration. A reprint of his article is before me, and I will quote from it. On page 16 he says: "The occasional occurrence of erysipelas after vaccination with the Jennerian stock was an evil which no degree of prudence in the selection of the virus, study of coincident influences, or of the condition of the subject, could altogether guard against." In another place on same page he again says: "It is said that erysipelas is particularly liable to occur in revaccination with humanized lymph." He then goes on to quote Dr. Martin's evidence, given in the Boston Medical and Surgical Journal, for February, 1877, as the basis of the full and sweeping statement which he is now prepared to make, namely, "that erysipelas, which is the *pest* of humanized virus, does not occur at all after the use of bovine virus, *but that it is even prophylactic of erysipelas*." (The italics are partly my own.)

The published records of the New York Dispensary and the Kine-Pock Institution, show that this "pest of humanized virus" occurred in about one in five hundred cases. When we take into consideration the devitalized constitutions of many of these tenement-house children, who constitute the large majority of dispensary patients, the septic influences which always abound in charitable medical institutions, and the insanitary condition of the homes of these children, we might better wonder that only 0.2 per cent. of these minor operations was followed by erysipelas. The writer used the old Jennerian stock of lymph for seventeen years, and never had erysipelas or any other septic influence follow its use, while he has since had several cases of erysipelas and very many mild cases of local septic inflammation as attendants upon the action of bovine lymph.

There were several cases of erysipelas among vaccinated infants in Brooklyn last year, just how many I have been unable to ascertain; and one of them at least proved fatal. Seven cases were reported to the New York Health Department. Dr. Taylor wrote me that "the report may not be very trustworthy, as it is possible that all cases were not reported." He added that it is his opinion that very little erysipelas prevailed in the city last year, and that very much more might be expected this year.

[1] See Mem. Med. Society Journ., description by J. Bureau, 1794, vol. ii., p. 234.

cases of persistent and incurable intestinal obstruction." He states that he had nine patients in the Kölner Bürger Hospital, seven of whom were suffering from cancer of the œsophagus, one from cancer of the pylorus, and one from chronic gastric ulcer. In all these cases a cleansing injection was administered in the morning, followed by finely divided beef and pancreas (1 lb. beef to ½ lb. pancreas), the whole being freed so far as possible from fat and connective tissue. One-half this quantity was used at noon, and the other at 6 P.M. Results excellent. Solid, well-formed fæces were discharged each day. Patients were able to walk about, and lived in this way an average of nine months, or more.

In the list of authorities subjoined, direct or indirect reference is found to more than four hundred cases. The treatment, so far as materials used is concerned, is substantially the same. In by far the largest number enemata of eggs, milk, and beef-broth, with and without stimulants, were given. Defibrinated blood was also used in some instances, but there seems to have been a general experience of difficulty arising from the strong tendency of blood to decompose in the rectum. My friend Dr. A. H. Smith reports eleven cases in which the blood alone was used, and in which assimilation failed in only one case. In that case the odor emanating from the patient became so offensive as to pervade the whole house, and require a suspension of its use.

I am unable to fix the exact date of the first use of defibrinated blood. Reports upon this form of injection are found in "Proceedings of the Therapeutical Society, New York, 1878," xxviii., p. 81, and in *New York Medical Journal*, 1879, xxix., p. 404. The second report says "the material for this paper is extremely meagre, consisting only of two experiments by myself and six cases—three by myself, two by Dr. Douglass, and one by Dr. Hadden." The report in "Proceedings of the Therapeutical Society" mentions sixty-three cases successfully treated with blood. It is impossible to specially describe these interesting cases in this article. We therefore note that in dysphagia, septicæmia from wounds, cancer of the pylorus, and in cases of malnutrition by the stomach from various causes, blood was found very useful, unless undue irritability of the rectum prevented the retention of the enemata. Dr. Andrew H. Smith, in the *Archives of Medicine*, vol. i., 1879, recounts eighty cases, of which there were only two or three where rectal irritation was sufficiently great to cause a return of the injections of blood. The conclusions of this distinguished physician I brief as follows: That defibrinated blood is admirably adapted for use in rectal alimentation. Doses of two to six ounces given once or twice daily produce more or less constipation, which in a small number of cases becomes persistent. In a very small number of cases irritability of the bowels attends its protracted use, but was unaccompanied by dangerous or even serious symptoms.

There is no doubt that the use of this material, properly prepared, was a step in the right direction; but more remained to be done. An interesting article in the *Journ. de Thérap.*, Paris, 1880, vii., p. 846, describes some observations on the use of dried beef's blood ("Le Sanguis bovinus exsiccatus et l'hémoglobine"). These, with other reported cases, prove that cooking by chemical or other means is necessary to the best success. Yet it is curious that, as late as 1878, one of our most eminent authorities declares that "whatever may be the explanation, clinical observation fully establishes the fact that the digestion of animal broths, milk, and eggs, takes place in the rectum, without the addition of pepsin and hydrochloric acid."

It is interesting to note the great variety of nutrient and stimulating enemata recommended at different times. Hot injections, cold (P. Dagaud: "Action physiologique, et usages thérapeutiques des lavements froides," Paris, 1879), of medium temperature, and of almost every conceivable composition, from red wine to elaborate mixtures of bouillon, eggs, milk, and stimulants are in the list. Even enemata of tobacco smoke are mentioned in 1756 (G. A. Languth: "Candid. Joan Ludov. etc. Henne Wittembergæ"). The earliest mention of pancreatic enemata with which I am acquainted is in 1671 (in "Tractatus Anat. med. de succi pancreatici matura et usu," p. 216, Batav.).

Nutrient suppositories are described in the *St. Louis Surg. and Med. Journ.*, April, 1882, p. 419, referring to the *British Med. Journ.* of February 19, 1881: "Artificially digested meat is mixed with a little wax and starch, and made into a suppository. They are of such a size that the digested and extracted product of twenty ounces of meat, from which the insoluble matter is removed, is contained in about five suppositories. The convenience of this method is very great. It is easy for most patients to introduce them themselves, and their use is attended with no discomfort whatever, in the majority of cases. After an hour or two the waxy basis is frequently returned, the peptone and extractive being absorbed. In some cases, owing to irritability of the rectum, the whole suppository has been returned; but this can be obviated by the addition of a little opium to each suppository."

In the case of the late President Garfield we were enabled, through the kindness of Dr. Smith, to use specially prepared blood. It was found, however, that the same trouble arose as in the last case cited under this head, and we were forced to discontinue it. Whether this result was due to the general debility of the patient or to the unstable nature of the substance used, I cannot say, but it is probable that both causes contributed. It is certain that all difficulty vanished when we resumed the use of beef-peptonoids.

The question is often asked, "How long can life be supported by rectal feeding?" Experience teaches that, except in cases of malignant disease (always self-limited), there is practically no limit. Dr. Austin Flint reports one case, in which a woman subsisted for *five years*, almost wholly in this way, and during a period of one year and three months her sole nourishment was thus obtained (*Am. Practitioner*, January, 1878). Many other cases might be cited, did space allow. We can only refer to them by giving date, journal, author, etc. The possibility of sustaining life by enemata has been supposed to involve the presence of secretory or assimilant glands in the descending colon. Unless we admit that a *reversal of peristaltic action* is possible, by which nutrient enemata, partially digested by artificial means, are carried into the smaller bowel, it will be found very difficult to account for the success which has followed this mode of nutrition. The permeability of the entire alimentary canal by enemata is an established fact (see "Med. and Surg. Hist. of the War," part ii., p. 836). Enemata have passed through the whole digestive tract, and been ejected by the mouth (*Quebec Med. Journ.*, 1827, ii., p. 201); also Dr. R. Baltry, *Virginia Med. Monthly*, Richmond, 1878, v., p. 531. Of course mere mech-

anical force could not secure this result. It is self-evident that while the injecta may have been carried as far as the cœcum by force alone, the only way in which it is possible to account for a fact so remarkable as the above, is upon the theory of a reversal of the incessant and automatic action of the muscular wall of the small intestines.

It is extremely improbable that assimilation takes place in the lower bowel, save as crystallizable principles may dialyze through the mucous membrane. There is ample authority establishing the fact that only a doubtful opinion is now held as to the existence of solitary glands in the rectum, in any number which is of practical importance. No physiologist would for a moment accept the theory that the down-dragging hemorrhoidal plexus of veins which embraces the rectum can, by any stretch of imagination, be erected into truly absorbent organs, much less organs capable of converting proximate principles into those emulsions which alone can be taken up by the lacteals of the small intestines.

In fine, the lower bowel is essentially an excretory magazine, and should be so regarded in dealing with this whole question. That absorption of excrementitious matter could have been intended, or under any circumstances rendered consistent with health, is wholly illogical.

In this connection I direct attention to the case of a distinguished gentleman whom I am now treating for persistent inability to digest any form of food in the stomach. Four hours after receiving an injection of peptonized beef-broth, he declares that he distinctly recognizes the taste of the peptonoids in the mouth.

The same truth is instanced in two cases of fistulous openings in the transverse colon. In one of them, reported by Voillemier ("Bulletin Soc. Anat.," Paris, 1842, xvii., p. 339), through an artificial anus above the sigmoid flexure, perfectly emulsionized injecta were obtained.

Dr. Thomas J. Gallaher, of Pittsburgh, says (*New York Medical Journal*, 1879): "It is now taught that the albuminous, caseous, and fatty elements of enemata cannot be absorbed by the large intestines *without previous digestion*, and that when these substances are introduced into the rectum unchanged, they are precipitated upon the walls of the bowel, where they undergo fermentation and cause flatulency and pain."

A curious case is reported by Dr. J. H. Beech (*Michigan Medical News*, March 10, 1878), as having occurred in 1859. Sympathetic irritability, due to encephaloid of fundus and body of the uterus, rendered retention of any kind of food impossible. The only injecta used were chicken-broth, coffee and cream, beef-tea, with occasionally milk and eggs. She remarked that coffee and cream relieved the sense of "*famishing thirst*" better than any other injection. As she could not swallow or retain liquids, this fact was of the first importance. It also serves to confirm the doctrine of reversal of peristaltic action.

I subjoin a few cases of my own which illustrate the general statements made:

Case I.—J. D——, aged thirty-eight; cancer of the pylorus. Was unable to retain food of any kind. Great emaciation, thirst, hunger, and distressing insomnia. Ordered 6 ounces freshly made beef extract, with the addition of a teaspoonful of beef peptonoids, thrown into the rectum every four hours. At intervals of eight hours one-half ounce of whiskey was added, and at night twenty minims of McMunns' elix. of opium, in case rest had ready been obtained. It was not necessary a second night. Under this treatment the mor inent symptoms—thirst, sense of hunger, ing, and insomnia—were mitigated in a rem degree. This patient was supported for m three months in comparative comfort, dyi by extension of the local disease to oth organs.

Case II.—Mrs. H. R——, aged about fort tric ulcer. Frequent vomiting, rejecting the food taken. The most bland food tak the stomach produced obstinate nausea an ing. For some months previous to my fi had suffered from persistent constipation. injecta of freshly made beef extract with pe every four hours during the day, with occas ditions of stimulants as required. This t was continued for a period of three month which time she has taken only a small qu water per orem. For the past three week dences of reparation of the local trouble servable, peptonized milk and a tolerabl diet have been given per orem. Case in because reparative processes continued other treatment.

Case III.—Mrs. J. D——, aged nineteen. para. Persistent vomiting from pregnan able to retain either food or drink taken stomach. All the ordinary means used fail lieve the reflex irritability of the stomach emaciation, great general distress, and res followed; symptoms so urgent as to threat result. Abortion was apparently the only be pursued, until I happily thought that enemata of beef extract with peptonoids I able to sustain life and strength until th period of pregnancy was passed. This was d occasional additions of stimulants and ano indicated. Her strength was restored and relieved. After three months she became take beef extract with acid nitro-mur. dil. now in the fifth month of pregnancy, and general condition.

Case IV.—W. H. H——, aged fifty-eig been a generous liver, using wines at his m in moderation. Has had for the past t more or less frequent attacks of gastralgia while the stomach was comparatively em tacks characterized by severe pain and nau evidence of organic disease of either live neys. First treatment was by aconite, carb., magnesiæ sulph. and bitter tonics. relief lasted for a period of several mont cently, however, the same symptoms in a vated form recurred. Total inability to r food or liquid. Great local pain followed tempt to swallow food, and a peculiar featu case was inability to retain pepsin in a Gave 6 to 8 ounces beef extract with pe per rectum three times daily, which had the ate effect of giving rest, ease, and subsiden nausea and vomiting. After four days he able to resume stomachic digestion, beginn a light diet of bouillon, and at present (al weeks after the attack) is able to ride out a beef-steak each morning. I observed also lowing the rectal administration of beef pe his pulse became less frequent, and the reli the symptoms was prompt and complete.

Case V.—Mrs. S——; age about twent primipara; puerperal septicæmia, the sequ

[redacted] the most [redacted] plying artificial [redacted] acquainted. Our [redacted] when I refer to the [redacted] strongly marked in the [redacted] patient. The result of the use [redacted] was that the lower bowel [redacted] count of enemata. [redacted] and the general [redacted] relieved. The [redacted] this form were at first [redacted] and probably for [redacted] decomposition [redacted] each alternate day they were [redacted] in ica. Recently, however, [redacted] preparation of beef peptonate [redacted] Messrs. Reed & Carnrick [redacted] pared by these gentlemen, the value of which in the [redacted] physician and surgeon can scarcely be overestimated, inasmuch as it is always immediately available, not dependent upon refrigeration for integrity of condition, and the results of its use are even more marked and immediate than those of any of the numerous preparations which I have heretofore employed.

W. Joseph Tyson, M.D., F.R.C.S., Parkestone, in *British Medical Journal*, March 5, 1881, says: "To show how little this method of feeding is valued, I quote from Wood's well known treatise on therapeutics (3d ed.): 'The solvent influence of the rectal juices is practically nothing, and formerly the attempt was made to supplement this complete lack of power by the use of soups. It is evident that very little nutriment can be introduced into the system by such a plan; consequently feeding by the rectum has hitherto been a forlorn hope.'" Dr. Tyson adds: "Here, I take it, the author is speaking of unpeptonized injections of food." He then recounts some of his own experience which is so coincident with that already described that I content myself with reference to this very interesting article.

Finally, I deem it a duty to my fellow-men, as well as to the profession, to urge the importance of a careful study of this whole subject. Valuable lives may often be saved, and health and comfort regained, by the means alluded to in the latter part of this article, while alleviation of distress is in a great many cases proved possible by the references given, as well as by my own experience. It is true that in many forms of malignant or senile disease we can only look for a limited prolongation of life without return to health. Yet, even in these extreme cases, who shall deny that it is the stern duty of the physician to use every safe measure which shall secure even one more hour of existence!

The theory is simple, and is amply supported by indubitable reports. My only wonder is (after careful examination of the subject) that so many years have elapsed since ancient experiments without a more general adoption of a plan of nutrition at once safe, easy of administration, and always practically effective.

My thanks are due to Dr. W. C. Tilden for the laborious research required in securing the references to this subject.

AUTHORITIES CONSULTED OR REFERRED TO.

Audhoui (V.): Le mettoiement des voies digestives. Thérap. contemp. Paris, 1881, i., p. 177.

Regnier de Traaf: L'instrument de Molière. Traduction du traité de clysteribus. 8vo, Paris, 1675.

med. Tricini, 1790,

: De clystère febrium
nbergae, 1756.

De enematibus in-
Fr. Christmann &

'asser-injections, etc.
ch. f. chir. Berlin,

ritis, Referred to un-
'ract. Quebec Med.

ani. Medicina e la

oni di enteroclismo,
, 1880, xiii.

he Entire Alimentary
f their Surgical Ap-
onthly. Richmond,

gkeiten in Darm und
hr., 1874, xi.
la. Med. Times, 1878,

lel enteroclismo, etc.

einführung langer,
orcirte Wasserinjec-
f. Klin. Chir. Ber-

handlung der interen
lter. Jahrb. f. Kin-

n organis generationi
de usa siphonis in
ervol, 1668. Tract-
pancreatici, natura
e preceding.)

Experiments on the
rnal Application of
Phila., 1798.

re Medic. Zeitung.

itii et frigidi. Jenæ,

oncerning the Habi-
a. of Med. and Phys.
and 1837, ii., n.s.

rks on the Utility of
hods of Administer-
urn., London, 1818,

ionibus chirurgicis.
Pragæ, 1841.

ribus eorumque ef-

heodorus): De in-
xa. Erfordiæ typis,

Collectanea d. clys-

ecto clysterum in
lsse magd., 1757.

emata, Particularly
c. Med. and Phys.

ew Methods of Ad-
Injections. Lond.

Panegyrin medi-

cam indicit de clysterum nutrientium antiquitatæ et usu quædam data occasione commendatur, etc. Vitembergie, 1750.

Maxwell (G. T.): Can Nutritive Enemata be Digested and Assimilated? Phila. Med. Times, iv., 1874.

Raffaele (A.): Alimentazione indiretta per merzo dé clisteri nutrienti. Il Morgagni Napoli, iv., 1862.

Fiechter (R.): Anwendung und Erfolge der Fleisch-pancrea Klystiere. Corresp. Bl. f. Schweig Aerzte, 1875, v.

Woodward (B.): An Inquiry as to whether and how Enemata Nutrientiæ are Absorbed from the Rectum, so as to prove Nutrient to the System. Chicago Med. Journ., 1859, ii., n.s.

Kauffmann (G.): Zur ernährung der Kranken vom Mastdarm aus. Deutsche Ztschr. f. prat. Med. Leipsig, 1877, ii.

Laube (W. O.): Ueber eine neue methode der ernährung von Kranken per anum. Vorlänfege Mittheilung Deutsch Arch. f. Klin Med. Leipsig, 1872, ix.

Kolbe (P.): Ueber die Ernährung der Kranken vom Mastdarm aus. Griefswald, 1872.

Brit. Med. Journ., Sept. 17, 1881. Treatment of Disease called "Colon" in India, *i.e.*, Ulceration of the Deo-cæcal Valve. Nutritive Enemata stated to be the only known Means of Relief.

THE VOLUNTARY DISLOCATIONS OF A CONTORTIONIST.—Dr. Edmund Owens has furnished (*British Medical Journal*, May 6, 1882) an interesting account of the remarkable feats accomplished by Warren, the American contortionist, whose marvellous facility in effecting dislocations was once described by Dr. F. H. Hamilton. It appears that Warren is now thirty-four years of age, and possesses a most excellent physique, his muscular system having reached a rare grade of development. Being, as a child, subject to spontaneous luxations of the hip, he found himself able to rectify the mal-positions by his own personal exertions. Hence the origin of his efforts in this line. Now he has secured for himself control over certain isolated muscles, which usually are seen to act in concert. The following can thus be contracted individually: the biceps, supinator longus, radial extensors, sartorius, and platysma. But the most astonishing act is undoubtedly the one of which mention has already been made, viz., the dislocation of either hip-joint by personal muscular action. These deformities present all the features seen in Sir Astley Cooper's illustrations, except that the toes of the affected side do not necessarily preserve their classical relations to the opposite foot. Interesting as it would be, it is impossible to study out in detail the order of muscular movements over the course taken by the head of the bone in assuming its false position. But when accomplished, the summit of the great trochanter is at least one and a half inches above Nélaton's line, the cavity of the acetabulum is empty, and the head has travelled upward and backward. Among Warren's other accomplishments, he possesses the power of so contracting the abdominal muscles as to flatten the belly and thus define the aorta through the abdominal walls; or he can produce a phantom tumor by withdrawing the intestinal coils into the grasp of the rectus and oblique muscles. The tumor so produced is dull on percussion, and might even invite exploratory puncture.

anical force could not secure this result. It is self-evident that while the injecta may have been carried as far as the cœcum by force alone, the only way in which it is possible to account for a fact so remarkable as the above, is upon the theory of a reversal of the incessant and automatic action of the muscular wall of the small intestines.

It is extremely improbable that assimilation takes place in the lower bowel, save as crystallizable principles may dialyze through the mucous membrane. There is ample authority establishing the fact that only a doubtful opinion is now held as to the existence of solitary glands in the rectum, in any number which is of practical importance. No physiologist would for a moment accept the theory that the down-dragging hemorrhoidal plexus of veins which embraces the rectum can, by any stretch of imagination, be erected into truly absorbent organs, much less organs capable of converting proximate principles into those emulsions which alone can be taken up by the lacteals of the small intestines.

In fine, the lower bowel is essentially an excretory magazine, and should be so regarded in dealing with this whole question. That absorption of excrementitious matter could have been intended, or under any circumstances rendered consistent with health, is wholly illogical.

In this connection I direct attention to the case of a distinguished gentleman whom I am now treating for persistent inability to digest any form of food in the stomach. Four hours after receiving an injection of peptonized beef-broth, he declares that he distinctly recognizes the taste of the peptonoids in the mouth.

The same truth is instanced in two cases of fistulous openings in the transverse colon. In one of them, reported by Voillemier (" Bulletin Soc. Anat.," Paris, 1842, xvii., p. 339), through an artificial anus above the sigmoid flexure, perfectly emulsionized injecta were obtained.

Dr. Thomas J. Gallaher, of Pittsburgh, says (*New York Medical Journal*, 1879) : " It is now taught that the albuminous, caseous, and fatty elements of enemata cannot be absorbed by the large intestines *without previous digestion*, and that when these substances are introduced into the rectum unchanged, they are precipitated upon the walls of the bowel, where they undergo fermentation and cause flatulency and pain."

A curious case is reported by Dr. J. H. Beech (*Michigan Medical News*, March 10, 1878), as having occurred in 1859. Sympathetic irritability, due to encephaloid of fundus and body of the uterus, rendered retention of any kind of food impossible. The only injecta used were chicken-broth, coffee and cream, beef-tea, with occasionally milk and eggs. She remarked that coffee and cream relieved the sense of "*famishing thirst*" better than any other injection. As she could not swallow or retain liquids, this fact was of the first importance. It also serves to confirm the doctrine of reversal of peristaltic action.

I subjoin a few cases of my own which illustrate the general statements made :

Case I.—J. D——, aged thirty-eight ; cancer of the pylorus. Was unable to retain food of any kind. Great emaciation, thirst, hunger, and distressing insomnia. Ordered 6 ounces freshly made beef extract, with the addition of a teaspoonful of beef peptonoids, thrown into the rectum every four hours. At intervals of eight hours one-half ounce of whiskey was added, and at night twenty minims of McMunns' elix. of opium, in case rest had not already been obtained. It was not necessary after the second night. Under this treatment the more prominent symptoms—thirst, sense of hunger, vomiting, and insomnia—were mitigated in a remarkable degree. This patient was supported for more than three months in comparative comfort, dying then by extension of the local disease to other vital organs.

Case II.—Mrs. H. R——, aged about forty. Gastric ulcer. Frequent vomiting, rejecting most of the food taken. The most bland food taken into the stomach produced obstinate nausea and vomiting. For some months previous to my first visit, had suffered from persistent constipation. Ordered injecta of freshly made beef extract with peptonoids every four hours during the day, with occasional additions of stimulants as required. This treatment was continued for a period of three months, during which time she has taken only a small quantity of water per orem. For the past three weeks, as evidences of reparation of the local trouble were observable, peptonized milk and a tolerably liberal diet have been given per orem. Case interesting because reparative processes continued under no other treatment.

Case III.—Mrs. J. D——, aged nineteen. Primipara. Persistent vomiting from pregnancy. Unable to retain either food or drink taken into the stomach. All the ordinary means used failed to relieve the reflex irritability of the stomach. Rapid emaciation, great general distress, and restlessness followed ; symptoms so urgent as to threaten a fatal result. Abortion was apparently the only course to be pursued, until I happily thought that by using enemata of beef extract with peptonoids I might be able to sustain life and strength until the critical period of pregnancy was passed. This was done, with occasional additions of stimulants and anodynes as indicated. Her strength was restored and distress relieved. After three months she became able to take beef extract with acid nitro-mur. dil. She is now in the fifth month of pregnancy, and in good general condition.

Case IV.—W. H. H——, aged fifty-eight. Has been a generous liver, using wines at his meals, but in moderation. Has had for the past two years more or less frequent attacks of gastralgia, usually while the stomach was comparatively empty. Attacks characterized by severe pain and nausea. No evidence of organic disease of either liver or kidneys. First treatment was by aconite, sodii bicarb., magnesiæ sulph. and bitter tonics. Entire relief lasted for a period of several months. Recently, however, the same symptoms in an aggravated form recurred. Total inability to retain any food or liquid. Great local pain followed any attempt to swallow food, and a peculiar feature of the case was inability to retain pepsin in any form. Gave 6 to 8 ounces beef extract with peptonoids per rectum three times daily, which had the immediate effect of giving rest, ease, and subsidence of the nausea and vomiting. After four days he became able to resume stomachic digestion, beginning with a light diet of bouillon, and at present (about two weeks after the attack) is able to ride out and eat a beef-steak each morning. I observed also that following the rectal administration of beef peptonoids his pulse became less frequent, and the relief of all the symptoms was prompt and complete.

Case V.—Mrs. S—— ; age about twenty-eight ; primipara ; puerperal septicæmia, the sequel of un-

usually long and complicated labor, followed by acute cystitis with purulent discharge. Drs. Johnson Eliot and Robert Reyburn, of this city, were in consultation with me during the labor, the latter frequently visiting her with me subsequently, during the course of the septic fever. This case presented the more prominent and typical expressions of septicæmia, such as frequent rigors, generally more severe in the evening, great heat, extreme pungency of the skin, etc. The temperature ranged from 101.4° to 104°; pulse, 120 to 130; distressing restlessness, and characteristic mental disturbance. The lochia continued normal until the septic condition developed on the eighth day. Pultaceous passages from the bowels generally twice in twenty-four hours, and occasionally attacks of diarrhœa, which readily yielded to ordinary remedies. Tongue red at tip and edges, dry and covered with dark brown fur. Nausea and occasional vomiting. During the first five days of the fever the patient was unable to retain food. Only a little cracked ice was tolerated, even iced champagne being rejected. One tablespoonful of beef peptonoids dissolved in six ounces of moderately warm water, to which 4 drachms of whiskey and 5 grains of quinine, and occasionally 5 to 10 drops of deodorized tinct. opii were added. The quantity of the latter was increased at night to secure rest. These enemata were repeated every four to six hours for a period of four days, when the extreme irritability of the stomach had so far subsided as to enable it to retain the peptonoids and light milk-punches. These were alternated every third hour.

The above outline records the entire nourishment given this patient for eighteen days. The only medication other than that mentioned, was ½ gr. calcium sulphide every four hours, and occasional doses of carbolic acid and lime-water, with the view of sustaining the general antiseptic treatment, which included washing out the bladder twice daily with a solution of biborate of soda.

In a long experience I have never seen a case of this kind as serious as this in which the patient was so well sustained and repair so wonderfully prompt. In my judgment this was entirely due to the temporary relief of the stomach by injecta of peptonoids, and subsequently, as the stomach regained tone, repairing waste by a constant supply of these most assimilable nutrients. The patient is now (thirty-three days after delivery) safely convalescent.

Case VI.—The late President Garfield was some of the time entirely, and all of the time very largely, sustained by rectal feeding from the 14th of August until his death on September 19th. The value of this method of supplying waste in grave disease has never been more strikingly shown than in this instance, because in all probability there never was a patient more closely observed by his medical attendants, and because the quantity and quality of the rectal diet were most carefully regulated, both as to mode and time of administration. During the stage of inflammation of the parotid gland (eight days) this mode of sustenance was entirely relied upon, he being unable to take any food by the mouth and stomach, and only very small quantities of cracked ice and water, which were frequently rejected.

The quantities, carefully measured, were prepared at the dispensary of the Surgeon-General by Hospital Steward W. F. Crusor, U.S.A., in accordance with the following formula After the removal to Elberon, Mrs. Garfield herself prepared it.

War Department, Surgeon-General's Office,
Washington, July 26, 1873.

Circular Orders, No. 6.

The accompanying formula for the preparation of beef extract will be substituted for receipts Nos. 9 and 14 on the "Diet Table for Hospitals," issued from this office February 7, 1873.

By order of the Surgeon-General.

C. H. Crane,
Assistant Surgeon-General, U. S. Army.

"Beef Extract.—*Directions.*—Infuse a third of a pound of fresh beef, finely minced, in 14 ounces of cold soft water, to which a few drops (4 or 5) of muriatic acid and a little salt (from 10 to 18 grains) have been added. After digesting for an hour to an hour and a quarter, strain it through a sieve and wash the residue with 5 ounces of cold water, pressing it to remove all soluble matter. The mixed liquid will contain the whole of the soluble constituents of the meat (albumen, creatine, etc.), and it may be drank cold or slightly warmed. The temperature should not be raised above 100° F., as at the temperature of 113° F. a considerable portion of the albumen, a very important constituent, will be coagulated."

Two ounces of beef extract, 2 drachms of beef peptonoids, and 5 drachms of whiskey were given with scrupulous regularity every four hours, day and night. Occasionally 5 to 15 drops of deodorized tinct. opii were added as an additional nerve stimulant and anodyne, and also to secure retention of the enema. They were usually retained without causing any discomfort on the part of the patient, and, as a rule, once in twenty-four hours a discharge of healthy fæces occurred, generally of such consistence and form as would justify the belief that digestion had taken place in the small intestine. For the first five or six days the yolk of an egg was added to the injections, but in the judgment of the surgeons was the cause of annoying and offensive flatus. This symptom was promptly relieved by discontinuing the egg, and temporarily adding about a drachm of willow charcoal to the enema. Charcoal tablets by the mouth were also occasionally used.

There was a strong desire on the part of the physicians to discontinue the use of the stimulants, but on each occasion when the attempt was made the pulse became more frequent and feeble, so that we were forced to resume their use. Later in the history of the case, after the removal to Elberon, alimentation both by the rectum and the mouth was found to be borne without evidence of peristaltic antagonism.

In my own experience this is rare, one method being usually found more successful when the other was temporarily abandoned.

At this period fresh, defibrinated blood (supplied by my friend Dr. Andrew H. Smith) was, for four days, substituted for the beef peptonoids previously used. It was found, however, that the volume of offensive gases developed, together with the character of the ejecta, rendered a return to the beef extract and peptonoids necessary.

Early in the history of the use of enemata in this case, a firm in New York—Messrs. Reed & Carnrick—sent me a formula for the manufacture of a preparation which they called beef peptonoids, describing minutely their mode of preparing them. This I at once submitted to the council of surgeons, by whom it was approved as affording

the most reliable and effective means of supplying artificial nourishment with which we were acquainted. Our solicitude may be readily imagined when I refer to the evidences of inanition then so strongly marked in the case of our distinguished patient. The result of the use of these preparations was that the lower bowel at once became more tolerant of enemata. No offensive gases were generated, and the general condition of malaise was greatly relieved. The materials so kindly furnished us by this firm were at that time prepared in liquid form, and probably for this reason were liable to undergo decomposition at high temperatures. Therefore on each alternate day they were sent fresh, and packed in ice. Recently, however, I have been using this preparation of beef peptonoids supplied me by Messrs. Reed & Carnrick in powdered form, prepared by these gentlemen, the value of which to the physician and surgeon can scarcely be overestimated, inasmuch as it is always instantly available, not dependent upon refrigeration for integrity of condition, and the results of its use are even more marked and immediate than those of any of the numerous preparations which I have heretofore employed.

W. Joseph Tyson, M.D., F.R.C.S., Folkestone, in *British Medical Journal*, March 25, 1882, says: "To show how little this method of feeding is valued, I quote from Wood's well known treatise on therapeutics (2d ed.): 'The solvent influence of the rectal juices is practically nothing, and formerly the attempt was made to supplement this complete lack of power by the use of soups. It is evident that very little nutriment can be introduced into the system by such a plan; consequently feeding by the rectum has hitherto been a forlorn hope.'" Dr. Tyson adds: "Here, I take it, the author is speaking of *unpeptonized* injections of food." He then recounts some of his own experience which is so coincident with that already described that I content myself with reference to this very interesting article.

Finally, I deem it a duty to my fellow-men, as well as to the profession, to urge the importance of a careful study of this whole subject. Valuable lives may often be saved, and health and comfort regained, by the means alluded to in the latter part of this article, while alleviation of distress is in a great many cases proved possible by the references given, as well as by my own experience. It is true that in many forms of malignant or senile disease we can only look for a limited prolongation of life, without return to health. Yet, even in these extreme cases, who shall deny that it is the stern duty of the physician to use every safe measure which shall secure even one more hour of existence?

The theory is simple, and is amply supported by indubitable reports. My only wonder is (after careful examination of the subject) that so many years have elapsed since ancient experiments without a more general adoption of a plan of nutrition at once safe, easy of administration, and always practically effective.

My thanks are due to Dr. W. C. Tilden for the laborious research required in securing the references to this subject.

AUTHORITIES CONSULTED OR REFERRED TO.

Audhoui (V.): Le mettoiement des voies digestives. Thérap. contemp. Paris, 1881, i., p. 177.

Regnier de Traaf: L'instrument de Molière. Traduction du traité de clysteribus. 8vo, Paris, 1878.

Lasèque: L'apothéose de lavement. Gaz. d'hôp. in Med. prat. Paris, 1831, ii., p. 109.

Aran (F.A.): De l'emploi des lavements de vin, en particulier dans le traitement de la chlorose, de la dyspepsie, de la phthisie pulmonaire, etc., et dans le convalescence des maladies graves. Bulletin Génde Thérap. Med. et Chir. Paris, 1850, xlviii., pp. 10–14 et 54–68.

Lefebvre (Cassimir-Anne): Considerations sur les avantages des lavements dans le traitement de certaines maladies, etc. Thése, vi. Paris, 1811, No. 73, p. 7.

Caulet: Contribution a l'histoire de la douche ascendante, etc. Ann. Soc. hydrol. Méd. de Paris, 1879, xxx., p. 124.

Faurie (T.): Des lavemènts de vin. 4to, Paris, 1864.

Pitancier: Considerations médicales sur l'utilité des diverses injections, etc. Thése Paris, p. 28. 4to.

Gobley (T.) et Bochin: Lavements Bibliographie Dictionnaire Encyclopédique des Sci. Med. Paris, 1869. 11. 2d ser., pp. 56 et 88.

Senné: Du parti que l'on peut tirer de l'administration des clystères nutritifs, etc. Bulletin Gen. de Thér. Med. et Chir. Paris, 1840. xix., p. 305.

Voillemier: Case of Artificial Anus above Sigmoid Flexure. Injection of Alimentary Substances with Good Results. Bulletin Soc. Anat. Paris, 1842, xvii., p. 339.

Lenoir: Les injections alimentaires poussées directèment dans l'intestin chez les malades affectis d'anus contre natura. Bull. Soc. Chir., Paris, 1853, iii., p. 511.

Dujardin-Beaumetz: Des lavements nutritifs. Bull. Soc. de Thérap., Paris, 1879, 1880; 2me ser., vi., p. 25.

Pera (S.): Morgagni, Napoli, xxi., p. 256. 1879.

Cantani: Presse méd. Belge., Brux., 1879, xxxii., p. 275 (from Morgani Napoli).

Paolucci (G.): Morgani, Napoli, xxi., p. 254, 1879.

Monti (C.): Bull. d. sc. med. di Bologna C. S., vi., p. 256.

Cantani (A.): Due nuove indicazione dell' enteroclismo, etc. Morgani, Napoli, 1879, xxi., p. 246 et 241.

Varvelli (E.): L'enteroclism nella cura della malattie intestinali. Indipendente Torini, 1879, xxx., p. 449.

Morgani, Napoli, 1862, iv., p. 571, and 1878, xx., p. 273.

D'Ancona (N.): L'enteroclisma nelle malattie del intestino. Gaz. Med. Ital., prov. venete, Padova, 1879, xxii.

Pera (S.): Contribuzione clinica ella cura delle malattie intestinali per mezzo dell' enteroclismo. Morgagni Napoli, 1879, xxi.

Bull (E.): Om nyere mekaniske Behandlingsmetoder af sygdomme i Maven og Tarmkanalen. Norsk Mag. f. Lægevidensk. Christiania, 1877, vii.

Langguth (G. A.): Wittenbergæ, 1756 (Enemata of Tobacco Smoke).

Diaper (J.): De clystère, Edinburgi, 1754.

Dagand (P.): Action physiologique et usages thérapeutiques des lavements froids. Paris, 1879.

Zur kemtiss der kalten klystière, St. Petersb. med. Wchnschr., 1879, iv.

Lapina (J.): Ke uchemion cholodniche Klisteruche (Cold Clysters). Voyenno Med. Journ. St. Petersb., 1879, cxxxiv.

Traube (L.): Zur Wirkung der Clysmata. Beitr. z. Path. und Physiol. Berl., 1878, iii.

Meyer (J. C.): Tractatis de clysmatibus. Goettin-

gae, 1786. In Delect. Opuscl. med. Tricini, 1790, ix.

Henne (Joannes Ludovicus): De clystère febrium exanthematicarum, etc. Wittenbergae, 1756.

Girard (Jacobus Josephus): De enematibus intestinalibus, etc. Argentorati. Fr. Christmann & Levrault, 1762.

Hagedom. Vorrichtung zur Wasser-injections, etc. Verhandl. d. Deutsch Gesselsch. f. chir. Berlin, 1877, vi.

Leslie (W. H.): Case of Gastritis, Referred to under Permeability of Digestive Tract. Quebec Med. Journ., 1827, ii.

L'enteroclismo del Prof. Cantani. Medicina e la chir. Roma, 1880, i.

Colantoni (C.): Due applicazioni di enteroclismo, etc. Raccoglitore med. Foolè, 1880, xiii.

Baltey (R.): Permeability of the Entire Alimentary Canal by Enemata, with some of their Surgical Applications. Virginia Med. Monthly. Richmond, 1878, v.

Ueber einführung von Flüssigkeiten in Darm und Harnblase. Berl. klin. Wchnschr., 1874, xi.

Evans (H. F.): Enemata. Phila. Med. Times, 1878, viii.

Cantani (A.): Le indicazioni del enteroclismo, etc. Morgagni, Napoli, 1878, xx.

Simon (Prof. G.): Ueber die einführung langer, Elastischer Rohre und über forcirte Wasserinjectionen in den darmcanal. Arch. f. Klin. Chir. Berlin, 1872, xv.

Baginsky (A.): Zur localen Behandlung der interen darmabschritte im kindlischen alter. Jahrb. f. Kinderheilk. Leipsig, 1876, ix.

Graaf (Regnerus): De viroerum organis generationi inserventibus, de clysteribus, et de usa siphonis in anatomia. Lugol, Batav et Rotervol, 1668. Tractatus anatomico medicus *de succi pancreatici*, natura et usu. 1671. (Bound with the preceding.)

Hahn (J.): Observations and Experiments on the Use of Enemata, and the External Application of Medicines to the Human Body. Phila., 1798.

Meyer: Ueber Luft. Klystiere Medic. Zeitung. Berlin, 1835, iv.

Stüven (H. J.): Clystères nutritii et frigidi. Jenæ, 1718.

Jackson: Practical Remarks Concerning the Habitual Use of Enemata. Ind. Journ. of Med. and Phys. Science. Calcutta, 1836, i., n.s., and 1837, ii., n.s.

Machell (T.): Practical Remarks on the Utility of Enemata, and on Improved Methods of Administering Them. Med. and Phys. Journ., London, 1818, xl.

Bergmann (F. C.): De injectionibus chirurgicis. Lipsiæ, 1757.

Stratka (F.): De enematibus. Pragæ, 1841.

Laphrain (J. M.): De clysteribus eorumque effectibus. Halæ Saxonum, 1781.

Rantsch (Theophil. Ernest Theodorus): De insigni clysterum utilitate, atque noxa. Erfordiæ typis, 1748.

Millies (Carolus Fridericus): Collectanea d. clysmatibus. Lipsiæ, 1843.

Furger (T. F.): De circumspecto clysterum in morbis exanthematicis usu. Halsæ magd., 1757.

Blyth, S. C.: On the Use of Enemata, Particularly in Cases of Gastritis, Enteritis, etc. Med. and Phys. Journ., Lond., 1800, vol. iii.

Carson (J.): Propositions for New Methods of Administering Enemata and other Injections. Lond. Lancet, 1844, i.

Trillerus (Danl. Wilhelmus): Panegyrin medicam indicit de clysterum nutrientium antiquitatæ et usu quædam data occasione commendatur, etc. Vitembergie, 1750.

Maxwell (G. T.): Can Nutritive Enemata be Digested and Assimilated? Phila. Med. Times, iv., 1874.

Raffaele (A.): Alimentazione indiretta per mezzo dé clisteri nutrienti. Il Morgagni Napoli, iv., 1862.

Fiechter (R.): Anwendung und Erfolge der Fleisch-pancrea Klystiere. Corresp. Bl. f. Schweig Aerzte, 1875, v.

Woodward (B.): An Inquiry as to whether and how Enemata Nutrientiæ are Absorbed from the Rectum, so as to prove Nutrient to the System. Chicago Med. Journ., 1859, ii., n.s.

Kauffmann (G.): Zur ernährung der Kranken vom Mastdarm aus. Deutsche Ztschr. f. prat. Med. Leipsig, 1877, ii.

Laube (W. O.): Ueber eine neue methode der ernährung von Kranken per anum. Vorlänfege Mittheilung Deutsch Arch. f. Klin Med. Leipsig, 1872, ix.

Kolbe (P.): Ueber die Ernährung der Kranken vom Mastdarm aus. Griefswald, 1872.

Brit. Med. Journ., Sept. 17, 1881. Treatment of Disease called "Colon" in India, *i.e.*, Ulceration of the Deo-cæcal Valve. Nutritive Enemata stated to be the only known Means of Relief.

THE VOLUNTARY DISLOCATIONS OF A CONTORTIONIST.—Dr. Edmund Owens has furnished (*British Medical Journal*, May 6, 1882) an interesting account of the remarkable feats accomplished by Warren, the American contortionist, whose marvellous facility in effecting dislocations was once described by Dr. F. H. Hamilton. It appears that Warren is now thirty-four years of age, and possesses a most excellent physique, his muscular system having reached a rare grade of development. Being, as a child, subject to spontaneous luxations of the hip, he found himself able to rectify the mal-positions by his own personal exertions. Hence the origin of his efforts in this line. Now he has secured for himself control over certain isolated muscles, which usually are seen to act in concert. The following can thus be contracted individually: the biceps, supinator longus, radial extensors, sartorius, and platysma. But the most astonishing act is undoubtedly the one of which mention has already been made, viz., the dislocation of either hip-joint by personal muscular action. These deformities present all the features seen in Sir Astley Cooper's illustrations, except that the toes of the affected side do not necessarily preserve their classical relations to the opposite foot. Interesting as it would be, it is impossible to study out in detail the order of muscular movements over the course taken by the head of the bone in assuming its false position. But when accomplished, the summit of the great trochanter is at least one and a half inches above Nélaton's line, the cavity of the acetabulum is empty, and the head has travelled upward and backward. Among Warren's other accomplishments, he possesses the power of so contracting the abdominal muscles as to flatten the belly and thus define the aorta through the abdominal walls; or he can produce a phantom tumor by withdrawing the intestinal coils into the grasp of the rectus and oblique muscles. The tumor so produced is dull on percussion, and might even invite exploratory puncture.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, July 15, 1882.

IODOFORM AND PHTHISIS.

It is probably not possible for madness to ally itself to an entire body of learned men. If it were, we should say that our German brethren were suffering from iodoform monomania. Iodoform is talked of in every medical society, and heads alternate articles in all the medical journals. The insanity of iodoform is quite as apparent as the primäre verrücktheit of Guiteau, but affects the mass instead of the individual.

Iodoform is not only claimed to furnish the ideal surgical dressing, but we every day learn of new external and internal uses for it. Its value in eye, ear, throat, and uterine troubles has long been known, but is now enthusiastically magnified. We find also the iodoform treatment of syphilis competing with that by mercury. It cures diphtheria and gastric ulcer; it is, says Moleschott, a most efficient help in diabetes mellitus.

Very recently Dr. B. Küssner, of Halle, has asserted that iodoform is most helpful and even curative in tuberculosis of the larynx and lungs. Some time ago Aschenbrandt, of Wurzburg, found in experimenting upon cats, that the inhalation of iodoform caused pneumonia and death in these animals. He advised against its use, therefore, in phthisical diseases in man. Küssner, however, reasoned from another standpoint. In all the discussions and disputes over iodoform, one point is uniformly conceded—the drug has an influence, almost specific, over tuberculous swellings and ulcerations. Why should it not, therefore, have an equally good effect upon tuberculosis of internal organs? Küssner, after some trials, found that iodoform inhalations had not the irritating effect upon human lungs which Aschenbrandt predicted. It excited no cough, and was even given to a patient who was subject to attacks of hæmoptysis without harm. Küssner used the drug first in tuberculosis of the larynx. The efficacy of it here is already well known, and nothing especially new is given by our author. His method was to blow iodoform into the larynx once a day. In addition, the patient was made to inhale three or four times daily a solution of iodoform composed as follows: About ʒiss. of a ten per cent. alcoholic solution of iodoform is put in an inhaling apparatus holding an ounce. The apparatus is then filled with water, by which a milky emulsion is produced. The mixture must be prepared fresh each time. The success following this treatment is reported as very great.

In the treatment of pulmonary tuberculosis more difficulty was encountered. In order to get the specific effect of iodoform, the drug needs to be brought into actual contact with the diseased surface. This it is not possible to do by any measure at present known.

The nearest approach to it is by the use of inhalations long continued. These were used by Dr. Küssner. He found that in most cases they produced a diminution in cough and expectoration, with subsidence of fever. The actual permanent good he had not yet been able to determine. The inhalations, he states, must be kept up for months, and this, we are further told, can be done without producing toxic symptoms. The author expresses the belief that by his new method many cases of pulmonary phthisis can be cured.

If so, the present apotheosis of iodoform will be justified. We fear, however, that many persons will prefer phthisis to constantly inhaling iodoform, even if that drug proves of decided value.

MEDICAL JUBILEES.

We intend no disrespect in saying that there are two classes, the medical German and the spiritual African, who look forward with a special definiteness to crowning their life with a jubilee. To the African the "kingdom's comin'" at a rather vague time, varying with the religious illumination of the individual. With the German doctor a jubilee comes on the twenty-fifth or fiftieth year of his doctorate, or perhaps when he has reached two score and ten and is ready to retire from his professional chair.

We are led to comment on the above facts by the frequent occurrence of medical jubilees among our German brethren of late. Virchow, Artl, Bischoff, Henle, Botkin, and others have all had anniversary honors paid to them. Even the medical journals share in this jubilant custom, and the *Allgemeine Medicinische Central-Zeitung*, a Berlin bi-weekly, not long ago celebrated the completion of its twenty-fifth year and fiftieth volume.

The spirit prevailing in the profession which enables the medical jubilee to be so frequently and heartily celebrated is certainly a good one. No one in this country thinks of undertaking such affairs

except in the rarest instances. Can it be that when a medical man gets old his juniors are more anxious to supplant than to honor him?

There are some features in our medical system very different from those in Germany. This may have something to do with the feeling prevailing toward medical seniors. In Germany rational medicine is in the hands of professors, assistants, docents, etc. Those who have anything to write or to say have, as a rule, some official position. The younger men have been pupils of the older, and old and young generally have, in consequence, mutual kindly feelings. When the master has reached his semi-centennial, he has many pupils anxious to do him honor.

It will not be possible for such arrangements to exist here, at least for many years. But there might be cultivated a more cordial respect and sympathy for the Nestors in the profession.

THE QUARREL OVER THE AUTOPSY.

THE quarrel over the matter of the autopsy upon Guiteau adds another unpleasant chapter to a history already full of humiliations to the medical profession. The point at issue was petty enough, and in no way deserved the publicity it has received. Dr. Lamb, as it appears to us, was justified in considering that the two gentlemen who especially assisted at the autopsy were not necessarily associated in making up the report. He was, we believe, actuated solely by a desire to secure and publish an entirely fair report. At the most it can only be said that it might have been more generous if he had made his report contain some acknowledgments of help given him by other gentlemen present.

But the legitimate field for medical criticism is the mode in which the autopsy was conducted and the character of the official report itself as a scientific document. A little examination of the notes upon the autopsy, published in THE RECORD last week, will show that the means for a thorough study of the brain were absent. This occurred apparently quite as much from a lack of knowledge as to what was needed as from want of opportunity. The defects of detail in the autopsy need not be recited here.

As regards the so-called official report, the description of the fissures, convolutions, and contours, undoubtedly the most important part, is most meagre and appears to contain a number of errors. There seemed to have been an inability to use intelligently, as well as to acknowledge courteously, the help given here.

But the subject is not an agreeable one and we do not care to dwell upon it further. Dr. Lamb is an excellent and fair-minded gentleman, who has simply been unconscious of his incompetency to conduct an important autopsy involving a study of the brain. We trust that his misapprehension will now be removed.

THE ARMY RETIREMENT BILL.

BY the retirement clause of the last Army Appropriation bill, the following medical officers were retired, having reached the age of sixty-four years, viz.: Surgeon-General J. K. Barnes, Colonels J. M. Cuyler, and W. S. King, and Lieutenant-Colonel James Simons. Thus has been inaugurated a new rule, which cannot but be of benefit to the whole army, and particularly to the Medical Department, Major Brown, for instance, having been stationary in the rank of major for twenty-one years. Promotion will now flow apace, as the rule adopted will limit the term of service of every officer. No one will say that the officers now retired are beyond further usefulness. They retire to inaugurate the rule, and the sacrifice they are called upon to make for the good of the whole army, of retiring before disability, will be accounted not the least among the acts for which they will be remembered.

These officers were already veterans of the Mexican War, in which Cuyler gained great reputation, and Simons was wounded when the War of the Rebellion broke out. King was the medical director of the first Bull Run, and Barnes and Cuyler became medical inspectors general. Cuyler is one of the most popular surgeons in the army—is respected, loved, and reverenced, above all. Barnes, as Surgeon-General, has had a greater influence on the fortunes of the medical corps than any of his predecessors. He has raised its morale by improving its personnel—the incompetent and black sheep have been excluded, and the vacancies filled by men of such excellence, that the corps to-day stands without a rival. Under the direction of Barnes the splendid "Medical and Surgical History of the Rebellion" has been published, a great medical library has been completed, the most extensive museum of the pathological products of war established, besides the ordinary routine duties, which have pressed not lightly at times. In retiring, Barnes can certainly look back with pleasure on the valuable work he has accomplished.

INSANITY AND DIVORCE.

A DISCUSSION on the question of insanity as a ground of divorce has recently taken place before the Academy of Medicine of Paris, and has excited considerable attention. The only prominent member who advocated that "insanity in certain determined cases should be considered a ground of divorce," was M. Luys. He presented his case very strongly, however, and he is undoubtedly correct in the position which he takes.

The state of the laws in this country regarding the subject in question is somewhat different from that in France, but the difference consists chiefly in rather more lax administration of a similar code. An American authority says: "Insanity occurring after marriage, with or without some predisposition, is, of course, insufficient to invalidate the ceremony,

and, though a misfortune which beclouds many a long conjugal union, is rarely permitted to become a legal ground of divorce, notwithstanding the strong social pressure sometimes exerted to have it added to the list." In Iowa and Kansas not even cruel treatment by one of the parties while insane is allowed as cause.

The only exceptions made are where insanity is brought on by intemperance, or is the result of a concealed hereditary taint. In these cases it is sometimes allowed. Of course, insanity or idiocy existing at the time of the marriage ceremony nullifies the contract.

The arguments used by those who would adhere to these old standards are partly scientific and partly sentimental. Thus it is said on the one hand that it is impossible to make an absolute prognosis regarding the patient's disease. He or she may get well. Then it is said, also, that insanity is only a disease; that the sufferer from it should not be divorced any more than if she had consumption or cancer. It is simply a misfortune, to be borne patiently.

That these are shallow arguments is apparent. The chances of recovery in most forms of insanity after four or five years are practically none. Yet the chances of the patient's living fifteen or twenty years are very great. The man or wife is, therefore, condemned absolutely to a single life. A divorce would free the sane without injuring the insane.

M. Luys, in dwelling upon the sentimental objections to his views, gave some practical facts of which all must admit the truth who are acquainted with asylums. He says that at first the husband or wife who is shut up in an asylum is very frequently visited. Before long, however, the visits become less numerous. In a few years, or sooner, the interest and the visits become perfunctory. It is hard to love a lunatic.

It would be a step in our social progress if the laws provided that in certain forms of insanity from which the party has suffered for (as Luys suggests) four years in man and five in woman, be allowed as a ground of divorce; provided, of course, that a certain provision for the support of the *aliéné* be made.

The only serious objection to such a change is in the practical difficulties which might occur in carrying out such a law and in preventing any abuses developing from it. This, however, is for the lawyer and not the scientist to consider.

An Effort to get Prof. Billroth at Berlin is said to be on foot. Prof. Langenbeck will soon retire from the Surgical Chair at that city. He desires to see his place filled by the one whom he considers his most brilliant pupil. Prof. Billroth is therefore selected. It is very doubtful, however, that any such change can be made.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 12, 1882.

Dr. Edward C. Seguin, President, in the Chair.

Dr. W. M. Carpenter presented a specimen in behalf of a candidate.

Dr. W. R. Birdsall, from the Committee on Microscopy, reported that the tumor presented by Dr. Robert Newman at the Stated Meeting held February 22, 1882 (see Medical Record, vol. xxi., p. 358), consisted simply of inflammatory tissue. No true glandular structure was found, and nothing that suggested the existence of malignant disease.

Dr. N. Bozeman presented a specimen of

CYSTIC SARCOMA OF THE MESENTERY AND OMENTUM,

accompanied by the following history:

The patient, a woman forty-six years of age, and a resident of Chicago, consulted him in February last, on account of an abdominal tumor which had existed, so far as she knew, for about a year. She was of medium height and stoutly built. She had enjoyed good health up to 1872, when she nursed her mother through a long sickness that necessitated standing or sitting most of the time, and this labor was followed by amenorrhœa that lasted for four months, when menstruation reappeared and continued at intervals of two weeks for several months; but it finally regulated itself, and she had good health until April, 1875. At that period she noticed, for the first time, an enlargement in the left side, which, in 1876, had attained considerable size, and was believed to be ovarian in character. Her attending physician tapped it and drew off thirteen ounces of light-colored fluid, and her general health afterward remained very good for eight or nine months, when evidence of refilling of the cyst was developed, and she then consulted a surgeon in Massachusetts. On account of some obscurity in diagnosis, he decided not to operate, and she then came to New York, when she was examined by one of Dr. Bozeman's colleagues in 1878; the tumor diagnosticated to be ovarian; ovariotomy performed, and the patient discharged cured. The patient remained apparently well until August, 1879, when she began to suffer from exhaustion due to over-work, and about a year afterward (1880) she discovered a projection just below the umbilicus, in the line of the former operation. This, however, gave her but little inconvenience at first, but was evidently a hernial tumor. About a year subsequently (1881) an enlargement was noticed to the left of the projecting portion below the umbilicus, and she consulted a surgeon who recognized the hernial tumor, and also expressed the opinion that the tumor to the left of it was ovarian.

On admission into the Woman's Hospital, February 20, 1882, the patient seemed to be in good health, and suffered no special inconvenience except that which was due to the existence of the large protrusion upon the abdomen. She was put upon a course of preparatory treatment for ovariotomy, consisting in the administration of 15 grains of salicin three times daily for two or three weeks; for four or five days immediately preceding the operation she had baths with inunctions with vaseline, and the night before 15 grains of quinine, and the bowels

emptied. Three hours before the operation she received 15 grains of quinine with 1 grain of opium, and went upon the table in good condition and took ether remarkably well. The hernial protrusion gave a peculiar emphysematous crackling sensation, and it was believed to be composed of coils of intestine and fluid, and also it was thought that adhesions existed between the protruding mass and the edges of the opening, which was situated between the recti muscles and was large enough to admit a man's fist. In view of the complication, Dr. Bozeman made an incision through the abdominal wall commencing to the left of the umbilicus, with the view to exploring from above downwards, to determine the condition of the hernia and the borders of the opening. After the incision was made, about two inches long, he was able to satisfy himself that there were no adhesions between the hernial sac and the borders of the opening, and he then extended the incision into the line of the original incision and carried it down to the lower angle. This brought into view the abdominal contents. The hernial protrusion was composed solely of a large cyst projecting forward and upon the right side of the main tumor. The large tumor was found to be very firmly fixed, and in order to ascertain its outline he removed the omentum, and then tapped it and drew off a gallon of fluid, the first being of a light yellow color, then came clear fluid, and this was followed by fluid having the color of claret. He was then able to explore, and found the uterus and remaining ovary in a normal condition. On examining the body of the tumor, it was found to be attached to the mesentery mainly. The adhesions were quite firm but they were broken up and the entire mass was enucleated and removed without hemorrhage. No vessels were ligated. Upon the omentum was a cyst, about the size of a hen's egg, extensively attached to the large tumor, and containing fluid of the same character. Upon the peritonæum, just above the bladder, were two other tumors, solid bloody tumors, easily broken up with the fingers, but they could not be scraped from the peritonæum. From these there was considerable hemorrhage and it was necessary to use the actual cautery to control it. The peritoneal cavity was thoroughly cleansed, and an operation for the radical cure of the ventral hernia was then performed, by excising, upon each side of the original incision, integument around the entire extent of the opening, so as to reach edges which were sufficiently thick to insure union firm enough to prevent recurrence of the difficulty. The wound was then closed in the usual manner with carbolized silk sutures, and a good line of union was obtained. The after treatment consisted in the use of quinine, opium, and the administration of beef juice by the rectum. The wound progressed favorably, but there was nausea and vomiting almost from the beginning, and it continued for forty-eight hours. Her pulse, however, remained below 100 for three days, and the temperature varied from 100° to 100¼° F. On the third day the vomiting had ceased, but the temperature had commenced to rise, and it continued to go up until on the sixth day it had reached 107° F., the pulse 126, and she died of peritonitis.

The tumor was composed of solid matter and cysts, and the large cyst was the one which projected through the opening in the abdominal walls. The solid portion had its attachment to the mesentery. The following is the report of the pathologist, Dr. W. H. Welch:

"The tumor is composed chiefly of cysts, but it contains some solid parts. The external surface of the tumor is in many places smooth and glistening, in other places there are attached bands of fibrous tissues and of adipose tissue, which represent old adhesions. Upon the external surface are unmistakable evidences that some of the cysts have ruptured into the peritoneal cavity. There are, namely, bands and ridges which represent the shrunken walls of ruptured cysts, and which are identical in appearance with similar structures on the inner surface of the cysts. Moreover the external wall of some of the cysts is extremely attenuated, as if about ready to burst.

"Upon sections the tumor is found to be composed of a large number of cysts, some no larger than a pea, others the size of an orange and even larger. The partitions between the cysts varied considerably in thickness, some being one or two centimeters in thickness, others being not more than a millimeter in thickness and film-like. In places there are evidences that the larger cysts are formed by coalescence of smaller ones. It is not possible to dissect the walls of the cysts into a fibrous and a mucous layer, as is the case with ovarian cysts. The thicker walls can be laminated into planes of fibrous tissue, the thinner walls cannot be laminated. There are places where masses of solid tissue are present as large as a hen's egg. This tissue is of a soft consistence and uniform grayish color.

"Upon microscopical examination the solid masses are found to consist almost wholly of spindle and round cells, without any regularity in the arrangement of the cells. These parts therefore are sarcomatous in structure. The inner surface of the cysts is devoid of any epithelial lining, although as a rule it is smooth. Only round and spindle cells can be scraped from its surface. The partitions between the cysts consists chiefly of fibrous tissue, containing blood-vessels and large lymph-spaces. The outer surface of the tumor is covered in smooth places by a layer of endothelial cells.

"The fluid in the cysts is thin and blood-stained, in some cysts yellow, in most claret-colored or brownish. In none of the cysts is any viscid fluid. The specific gravity of the fluid is 1018, the reaction feebly alkaline. Serum albumen is abundantly present, likewise a small quantity of paralbumin. The fluid is possessed of a feeble power of spontaneous coagulability. The microscopical examination of the fluid shows an abundance of normal and of shrunken red-blood corpuscles, also white-blood corpuscles, fat-granule bodies, some spindle-cells, and free granular material; no epithelium.

"The relations of the pedicle cannot be clearly defined.

"Probable diagnosis, *Cystic fibrosarcoma*."

TUMOR OF THE STOMACH.

DR. MESSENGER presented the stomach, removed from the body of a physician, seventy years of age, who began to feel that his health was failing about two years ago, when he had loss of appetite, flesh, and strength, and suffered from indigestion. Nothing very remarkable presented itself until December, 1880, when he first noticed a lump in the left hypochondrium. Having lived considerable of his lifetime in a malarial region, he at first thought it might be some trouble with his spleen, as well as his liver, which he seemed to regard as certainly diseased, functionally at least. The tumor was not painful, and only a slight uneasiness was produced by pressure. He was seen by several of his medi-

cal brethren, all of whom were of the opinion that the disease was malignant and situated in the stomach. For several months before death he vomited a greenish, slimy, more or less frothy material; and for three or four weeks immediately preceding the fatal termination, vomited coffee-ground material. He suffered from pain but little, and died an almost painless death. At the autopsy the liver was nearly normal, and the spleen was somewhat smaller than normal.

The stomach contained a tumor of considerable size. The specimen was referred to the Committee on Microscopy.

Dr. Messenger also presented a hard

TUMOR REMOVED FROM THE BREAST

of a woman about six months ago. It had given the patient considerable pain. Union of the wound took place promptly, and thus far there had been no evidence of recurrence. The specimen was referred to the Committee on Microscopy.

Dr. Sell said that he saw the patient from whose body Dr. Messenger's first specimen was removed, and while there was well-marked cachexia and tumor, the absence of pain was the notable feature, and the absence of vomiting of chocolate-colored material until a few weeks before death.

By way of comparison, Dr. Sell referred to a case in which several eminent physicians in the city had diagnosticated cancer of the stomach, but which made an apparent recovery at least, several times. Having succeeded in establishing these recoveries, he finally diagnosticated ulcers of the stomach, and the autopsy revealed, impaction of fæces, slight hardening of the pylorus, dilatation of the stomach, numerous cicatrices in the gastric mucous membrane, ulcerations of the stomach and of the œsophagus just before entering the stomach, and also ulcers in the duodenum.

Dr. E. L. Partridge presented a placenta, funis, and the remains of membranes which illustrated

PLACENTAL APOPLEXY AND SHORTENED FUNIS.

The patient was twenty years of age, single, and confined at the New York Infant Asylum, under the care of Dr. Parker, resident physician. Her last menstruation was in August, 1881. She felt quickening about the first of January, 1882. Her labor took place April 7, 1882.

Past health good, no syphilis as far as can be known. No history of injury, and during five weeks preceding labor was in hospital under observation, and no injury possible without cognizance of the resident physician. Patient not very bright, felt well up to occurrence of labor, supposing she felt life till that time.

The second stage of labor lasted thirty minutes, the third stage ten minutes. Pains normal. No recession of head during the second stage in intervals of contraction. The cord was not wound upon a limb or about the neck.

The child weighed two and a half pounds, and had the appearance of having been dead two weeks or more. The liquor amnii was of a dark coffee color. The placenta was of the size corresponding with end of the seventh month of gestation.

On its maternal surface was a depression two and a half inches in diameter, and an inch in depth, occupied by a clot of considerable consistency and tarry color. The edges of the cavity were smooth, and the placental tissue immediately adjacent was more dense than usual. On the fœtal side of the placenta almost directly opposite the clot was the insertion of the funis. The funis measured ten inches only.

The case illustrated one of the dangers attending short funis, viz., accidental hemorrhage and consequent death of the fœtus.

The cord being short, some sudden, violent motion of child produced dragging upon it, sufficient to detach the placenta and allow hemorrhage, in this case opposite the insertion of the cord. The condition of the fœtus indicated that its death took place quite a time previous to the labor.

The peculiar color of the clot, very dark, and its failure to be very firm and hard, would indicate that the child died at the time of the hemorrhage. If it had retained its life for a time, the utero-placental circulation continuing, the coloring matter and fluid constituents would have been removed from the coagulum, as can be demonstrated after those cases of accidental hemorrhage, when the child is born alive, and firm and more or less colorless clots escape with the placenta.

The coagulum resembled, in this case, that which would be found in an hæmatocele.

The specimen was referred to the Committee on Microscopy.

FUNGOUS ARTHRITIS—ARTHROTOMY AND SUBSEQUENT AMPUTATION.

Dr. C. K. Briddon presented a specimen with the following history. Mary Z——, twenty years of age, born in Ireland, single, and a domestic, was admitted to the Presbyterian Hospital January 20, 1882. The following notes of the case were furnished by Dr. H. A. Mandeville, house surgeon. The patient's family history was good. She had enjoyed good health, although always delicate, and had had most of the diseases of childhood. In February, 1881, she had a severe fall, striking on her left knee, to which she at first paid no attention, but subsequently it became swollen and tender on pressure, and in March of the same year she entered a hospital, where she was treated until October, when she was much improved. Last December she had another acute attack of inflammation in the joint, when an abscess formed on the inner side of the left knee, which opened spontaneously, giving vent to a thick, yellowish discharge.

On admission the patient was strumous and anæmic, and the knee-joint fixed and flexed. There were three small unhealthy ulcerating surfaces around the left leg, about two inches below the joint. At the bottom of each a small sinus led toward the joint. No dead bone was detected. Joint enlarged and somewhat tender. Evidences of old operation over head of tibia on the other leg.

Treatment consisted of rest, extra diet, tincture of iron, and cod-liver oil.

Under these her general condition improved somewhat, though the sinuses showed very little tendency to close. Within the last few days a scanty exudation of a material resembling synovial fluid appeared on the sores at each dressing. She was carefully probed, but no connection with the joint could be made out.

February 9th.—Chill, with considerable constitutional disturbance. Temperature, 104¼° F.; pulse, 124. Swelling increased. Throbbing pain in the joint, which was excessively tender. Ice to joint.

February 14th.—General condition running down rapidly. Joint symptoms all aggravated; insomnia and great complaint of pain. Temperature, 103° to

105° F.; pulse, 112 to 132. Operation by Dr. Briddon. Ether was given, and an incision six inches long made on either side of joint, evacuating a large quantity of pus. As the capsule of the joint was distended, it was aspirated, and pus detected. Free incisions were then carried through the capsule on either side, evacuating a considerable quantity of curdy pus. The synovial membrane was covered with granulation material. Three drainage-tubes were inserted clear through joint and syringed freely with acid carbol. dil. (1—40), carbolized gauze dressings were applied, and the limb put in a fenestrated immovable apparatus.

March 1st.—The patient's general condition improved somewhat after the operation. The wound was dressed every day with ℞. iodoform, ʒ i.; bals. Peru, ʒ iii.; vaseline, ʒ i. M. The cavity soon filled up with exuberant, pale, flabby granulations, and today the drainage-tubes were removed. Each dressing caused her extreme pain, and no adequate amount of pressure could be used. The granulating surfaces were covered with unhealthy gelatinous material. Iodoform dusted all over was substituted for the ointment before used, and the dressings were not removed for four to six days. After this, together with disturbance caused by fever and sweating, she began to suffer from occasional excessive nausea. Her temperature ever since the operation has ranged from 103° to 105° F., and pulse rapid and weak. Her general condition rapidly became poorer. Cough appeared, with sweating profusely at night. All symptoms but very little controlled by any treatment. Locally there was very little improvement, and the joint caused her excessive pain, and after each dressing her condition was extremely critical.

April 10th.—Bad bed-sores have appeared during the past few weeks, despite most careful care and water bed. There was now evidently no means of saving her life save by amputation, which was advised and accepted by the patient. Ether was given; and Dr. Briddon amputated the thigh at the middle with the lower third, by modified circular method. Very little blood was lost. The ends of the drainage-tube were left external to the dressings, which consisted of absorbent cotton, over the whole of the stump, and snug roller.

Condition of joint.—There was an abscess behind the head of the tibia communicating with the joint. The synovial membrane was in a condition of pulpy degeneration. The outer articular cartilages and the cartilages of incrustation were gone at several points on both joint-surfaces. The dense lamellæ of bone that underlies the cartilage were absorbed, exposing the cancellous structure.

Dr. Gibney asked concerning the condition of the patient's lungs at the time of the amputation.

Dr. Briddon said there was no evidence of organic disease, and since the operation the pulmonary symptoms had disappeared.

Dr. Gibney referred to a case, recently under his observation, in which he had occasion to remove the foot post-mortem and found nearly complete loss of the lower part of the tibia, and about one-third of the astragalus had been destroyed by caries. The boy was about fourteen years of age, had hectic fever, which he attributed to the disease of the ankle-joint, and did not examine the lungs. He supposed that the patient died of caries of the ankle-joint, but at the autopsy a large cavity was found in the right lung, and two-thirds of the left lung contained numerous small abscesses with marked increase of fibrous tissue, so that the only breathing space remaining was very small, and in making up the history of the case he found a marked tuberculous tendency.

He regarded it as not uncommon to have phthisis developed in children with caries of joints, even after the joint disease seems to be cured.

Dr. Briddon did not wish to be regarded as holding the opinion that it was proper to amputate for suppurating joint disease in patients with serious lung disease. In the beginning amputation might save life; but in advanced cases of pulmonary disease with caries of a joint, amputation might hasten the fatal result.

Dr. Peabody asked concerning the result of amputation through such a diseased joint, provided that skin enough could be obtained to make the flaps.

Dr. Briddon said that it was always desirable to operate as low as possible. Amputation through the joint, however, required large flaps, sometimes impossible to obtain. In his case the sinuses had degenerated into very large open sores covered with exuberant granulations, and the surrounding skin was undermined. But it is not necessary to sacrifice much of the bone to obtain readily flaps of sufficient size, and the operation he recommended was Carden's, removing a thin slice of bone embracing the articular surface of the femur, opening into the cancellous structure, but not into the medullary cavity. Of course, every inch of bone saved was important with reference to the subsequent use of an artificial limb.

SARCOMA OF THE OVARY.

Dr. George L. Peabody presented an ovary removed from the body of a woman, forty-two years of age, who died with symptoms accompanying chronic diffuse nephritis and amyloid infiltration of the Malpighian bodies and other blood vessels. The ovary was about the size of a hen's egg, and a firm, solid mass. The uterus had four myomata. The ovary was made up of a fibrous stroma, in the meshes of which were imbedded, without special arrangement, a large number of small round cells, a few spindle cells, and in the midst of these were large blood-vessels with thin walls. There was also some colloid material in which were lymphoi cells. There were no secondary deposits in any of the other organs. There was no history of symptoms referable to the ovary. The mucous membrane of the alimentary canal also showed amyloid degeneration.

ANEURISM OF THE RIGHT MIDDLE CEREBRAL ARTERY.

Dr. W. M. Carpenter presented a specimen which he removed from the body of a man who was found dead and brought to the Morgue. The stomach contained partially digested food. The aorta was atheromatous. The heart, lungs, and abdominal organs were normal. Profuse hemorrhage had occurred in the cranial cavity, and on examining the base of the brain it was found that the right middle cerebral artery had an aneurismal dilatation in its main trunk, seven-eighths of an inch long and half an inch in its greatest diameter. The sac had ruptured in its attached surface, where the tissues—when the sac was distended with air from the blow-pipe—were as transparent as is the arachnoid. The other arteries, at the base of the brain, were more or less atheromatous.

The President referred to a case which he saw

with Dr. Emerson, and which afforded a most remarkable example of sudden death. The man was reported by his wife and mother to have died almost in a moment, after having some obscure symptoms.

The autopsy revealed aneurism of the basilar artery and intermeningial hemorrhage.

Dr. Tauszky presented a specimen which illustrated

ULCERATIVE SYPHILITIC LARYNGITIS.

It was obtained by the favor of Dr. M. J. B. Messemer, deputy coroner, and was removed from the body of a man who was an inmate of the Colored Home, and committed suicide. There was a history of syphilis dating back to 1878. The man suffered greatly from dyspnœa, and arrangements had been made to perform tracheotomy. There was ulceration of the thyroid cartilage, necrosis of the lower part of the epiglottis, a loss of substance, and the left vocal cord was ulcerated. During the last two weeks of life there was great difficulty of deglutition.

Dr. Tauszky also presented a specimen of

UTERINE POLYPUS,

removed from a woman thirty-nine years of age, who had given birth to six children. The case had been diagnosticated to to be one of carcinoma; but dilatation of the cervical canal revealed the little tumor, half an inch in diameter and an inch and one-half long, which was readily removed and the patient cured.

Dr. Briddon believed that in the earlier stages of syphilitic laryngitis it was good treatment to perform tracheotomy and set the larynx at rest. Doubtless a prompt operation in the case Dr. Tauszky had mentioned would have saved the man's life. He then referred to a case in which the man was dying of apnœa from ulcerative syphilitic laryngitis, when he performed tracheotomy; the breathing after a little time became unembarrassed, and the patient recovered so as to be able to go about, but was never able to dispense with the tube. On several occasions Dr. Briddon was obliged to remove hard lumps of mucus from the trachea, and finally he made a free incision and removed the thyroid cartilage almost entirely, and it was found to have undergone calcification, and subsequently necrosis. The man died at the end of two or three weeks of exhaustion due to suppuration.

MALFORMATION OF THE HEART.

Dr. J. Lewis Smith presented a specimen with the following history: Some months ago he was asked at the New York Infant Asylum to examine a child that had become cyanotic. Nothing unusual was noticed concerning the infant until it was three weeks old. It was born of a mulatto woman, twenty years of age, and a primipara. The lividity was very marked, and it seemed evident that the child would not live very long. At various examinations, a loud systolic murmur was heard over any part of the chest, even laterally. Death occurred at the age of five months and twenty days, and was somewhat sudden. The development of the child was fair, it being wet-nursed by its mother. At the autopsy the chest was found rounded and bulging, corresponding with the lower third of the sternum. The lungs had probably never been fully inflated—the respiratory murmurs during life had been feeble, and were almost in the condition of semi-atelectasis.

The heart was nearly globular, its centre a little to the right of the median line. On removing it, a careful examination was made by Dr. Dawson, who found that the interauricular septum was nearly absent, leaving one cavity instead of two; and there was also a large opening in the interventricular septum. There did not seem to be constriction of the pulmonary artery sufficient to interfere with the circulation. There was a transposition of the aorta and pulmonary artery: the pulmonary vessel arising from the left ventricle, and the aorta arising from the right ventricle. At the arch they were in nearly the normal relation to each other.

The ductus arteriosus was probably enlarged.

The Society then went into executive session.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 25, 1882.

Dr. T. M. Markoe, President, in the Chair.

Dr. R. F. Weir read a paper

ON SOME RECENT METHODS OF TREATING HYDROCELE [see page 57].

Dr. Briddon remarked, concerning injections of iodine, that he had had considerable experience in that method and with only a very few failures. But he always allowed the iodine solution to remain in the sac, and he believed that that was one of the reasons, perhaps the chief, why the method had been so successful in his hands. He commonly used a drachm or a drachm and a half of Gugol's solution. He had performed Volkmann's operation in some half dozen cases, and had found it very difficult to keep the operation wound antiseptic with dressings.

Dr. A. C. Post referred to one case in which Volkmann's operation was performed by one of his colleagues, and it was followed by an amount of inflammatory swelling and induration he had never seen from the use of iodine injections, and it remained for several weeks.

Dr. L. A. Stimson referred to one case in which he used a solution of chloride of zinc, recently recommended for injecting the sac. The patient was a delicate boy, seventeen years of age. He did not dare to make the iodine injection from fear of excessive reaction. He first tapped the hydrocele two or three times, removing from 100 to 125 c.c. of clear serum, and then injected one drachm of a five per cent. watery solution of chloride of zinc through a hypodermic needle, immediately after removing about a drachm of the fluid. The injection caused no pain, but, almost immediately, the remaining serum coagulated. He heard nothing from the patient until the fifth day, when he returned and gave the following history. In the evening of the day on which the operation was performed he became nauseated, the scrotum became swollen and tender, also the penis. The nausea remained through the night and the next day, but on the second day he was comfortable, and subsequently suffered no inconvenience. On examination it was found that the tumor had reached nearly the size it had before any of the tappings had been performed, and the scrotum was decidedly œdematous and tender. In order to relieve the tension, Dr. Stimson withdrew nearly 100 grammes of highly coagulable liquid, and the patient then went on to rapid recovery. Six weeks after the operation the cyst of the hydrocele had entirely

disappeared. Dr. Stimson suggested that an improvement upon the method would be to use a small amount of chloride of zinc, after removal of all the contents of the sac, in order to avoid coagulation of the albuminous material, which required considerable time for its removal by absorption.

Dr. Post had been in the habit of treating simple hydrocele in children, when stimulating lotions and acupuncture had failed, by the introduction of a single thread of saddlers' silk, which was withdrawn as soon as a fair amount of inflammatory action was produced; for, if left longer, it sometimes set up excessive inflammation. According to his observation, when the thread had not been allowed to remain in position more than twenty-four hours, excessive inflammation had not followed. The cases which did not yield to stimulating lotions or acupuncture, however, were exceptional.

Dr. G. A. Peters had always found acupuncture sufficient to effect a cure in young children, and he had cured one case in an adult by the same method.

Dr. Pilcher said that in one of his earlier cases, occurring in children, he introduced a single thread of silk; and, although it was allowed to remain less than twenty-four hours, the reaction was excessive, and gangrene of all the parts in the neighborhood occurred and caused the death of the patient.

With regard to pure carbolic acid, he had used it in one case. The result was painless, and the cure rapid and apparently complete.

Dr. Briddon thought that the use of the seton in the hydrocele of children was a dangerous procedure, and that injection would be equally dangerous. The acupuncture had always succeeded in the cases which had come under his care. He had had gangrene occur in one-half of the scrotum after tapping, and that without any accident whatever during the operation. The patient was a boy, nine or ten years of age. The cure, however, was perfect.

Dr. Post referred to a case in which Sir Astley Cooper injected a hydrocele, in an old man, with port wine, and the patient after the operation went on a journey, and had an excessive inflammation which destroyed his life.

The President thought it an important question to be decided, as to whether or not it was justifiable to resort to measures which are severe and dangerous in the treatment of hydrocele occurring in children. For himself, he had always adopted the simple methods, and had not seen undue reaction, nor failed to see the recovery take place.

SEPARATION OF THE UPPER EPIPHYSIS OF THE FIBULA.

Dr. L. A. Stimson presented the upper portion of the fibula, with the following history:

A child, eighteen months old, was run over by a horse-car, and received injuries which caused its death a few hours afterward. The right leg was badly lacerated, and the knee-joint was opened upon the outside. The upper epiphysis of the fibula was completely separated from the shaft. The specimen was interesting with reference to two points: 1, the upper end of the shaft of the fibula was entirely denuded of periosteum. He had seen that fact recorded in two other cases, and, perhaps, it had something to do with the not infrequent occurrence of suppuration after such an injury. The periosteum remained adherent to the epiphysis; 2, the separation was clean, and without fracture of the bone proper, and occurred at the junction of the epiphysis with the shaft.

Dr. Stimson also completed the history of a case of

EPITHELIUM OF THE PENIS

which he had reported to the Society. [See Medical Record, vol. xix., p. 389.] About three weeks ago the patient presented himself with a return of the disease, apparently in the right crus, forming a tumor as large as a man's fist, spreading beyond the median line to the left, and well down into the perineum, but not interfering with urination. On examination through the rectum it was determined that there was no disease behind the arch of the pubis. The man had had no trouble with urination after the first operation. Dr. Stimson decided to undertake the removal of the return growth, and the operation was performed April 20th, by making a median incision, dissecting back to the right ramus and under the arch of the pubis. In making this dissection he burst the sac, which proved to be filled with soft, cheesy contents, that were evacuated very rapidly, and he then removed the mass piece-meal The disease was confined exclusively to the right crus. The dissection left the anterior face of the triangular ligament perfectly clean. He saved a stump of the urethra long enough to bring out at the lower angle, and secure it half an inch in front with stitches, leaving only the floor of the urethra, as the roof was damaged in the removal of this mass. The case progressed favorably, without inflammatory or other reaction, and the patient was discharged apparently cured. The point of special interest was the return of the disease after removal of the penis at least two and one-half inches above any diseased tissue. At the original operation, the penis was removed at the bifurcation of the corpora cavernosa. The disease returned in only one of the crura although both were involved in the glans. At the time of the first operation the glands in both inguinal regions were enlarged and hard, but the man said that they had been in that condition for several years before anything wrong with his penis was noticed. At the second operation, fifteen months subsequently, they were in the same condition as at the first.

OXALATE OF LIME CALCULUS.

Dr. E. L. Keyes presented the calculus material removed by rapid lithotrity from the bladder of a boy, nineteen years of age, who was referred to him by Dr. Vondy, of Jersey City. It weighed four hundred and forty-three grains, and he thought that the entire stone weighed one ounce. It was pure *oxalate of lime*. The operation occupied thirty-two minutes. The largest grasp was one inch and a fourth. Although he used a two-inch wheel—unusually large—the stone was crushed with a good deal of difficulty. The débris was removed without trouble through a No. 16 tube. It was the largest oxalate of lime calculus he had ever encountered.

The Society then proceeded to the transaction of miscellaneous business.

Cultivation of Cinchona in the United States.—Hon. S. J. Randall introduced the following resolution into the House of Representatives. It was unanimously adopted:

"*Resolved*, That the Commissioner of Agriculture be requested to inform this House whether any portion of the United States is adapted to the growth of cinchona."

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, June 26, 1882.

DR. F. R. STURGIS, PRESIDENT, IN THE CHAIR.

LEPROSY.

DR. H. G. PIFFARD presented a patient with the following history:

Mishikawa Lakichi, thirty years of age; Japanese; single; porter. Was admitted to Charity Hospital May 20, 1882. The patient's previous and family history was not obtainable, save in a very imperfect and fragmentary way, from a friend who understands a few words of English. From what could be obtained, the family record seemed to be a good one, no skin affection in any way like his own being traceable. He has lived all his life, until two years ago, in Japan, where he was a farmer. Soon after he came to New York, and has lived here ever since, working as a packer in a Japanese store. He himself denies syphilis, or any other serous disease. There is, however, a vague history of a gonorrhœa and bubo ten years ago. Six weeks before admission he fell sick. At that time spots appeared on his body, first on the legs, and then on arms and trunk. These spots, he says, came quickly —in a week the eruption was fully developed. After being sick a month he went to the New York Hospital, where he remained two weeks as a case of leprosy, and was then sent here. He himself thinks he has syphilis, though he says he has not had intercourse for ten years.

May 21st.—Diagnosis not fully made. Tr. quinine, gr. x., and iodide of potassium in small doses. Temperature, 101° F. Swelling and redness of face, looking like commencing erysipelas; also redness of chest, extending a little below the nipples. Some swelling and redness on hands and feet, in spots, especially left hand, which is stiff and swollen. ℞. Lot. plumbi et op., for face and chest.

From this time till June his temperature was 99½° to 100° F. Never over 100° F. after first few days.

Treatment: Quin., gr. i.; pot. iodid., gr. v., t. i. d.; pb. et op. wash.

Under this his erysipelas gradually disappeared, the eruption remaining about the same, save that the redness and swelling went down a little. There was a little desquamation on the chest and hands; none on the face. His general condition was fair.

June 1st.—Much improved. Temperature normal. Skin desquamating from hands, which, especially the left, are still sore. Facial redness going away. Appetite fair; bowels regular.

Dr. Piffard also read the following of another case, which was in the same hospital:

James E——, nineteen years of age; single; born in the West Indies, and a painter, was admitted December 2, 1880.

Family history.—Patient was born in Bermuda, and resided there one year after birth. From thence he was taken to Norfolk, Va., where he remained six weeks. From thence he was taken to Baltimore, where he has lived until he again went to the Bermudas, two years ago. Three weeks ago he returned from there. Has not been in any other localities. His father and mother are living and healthy.

Previous history.—Health has always been good. Had asthma when young. Says he has never seen any one affected with leprosy. Denies venereal altogether. Worked at his trade as a painter while in the West Indies.

Present history.—As near as the patient can recollect, his present trouble began two years and nine months ago, about one year before he went to Bermuda. The first thing he noticed was a numb feeling in the plantar surfaces of both great toes. Next brownish rings appeared on the posterior portion of both forearms; they were not elevated above the surface. These spots and rings gradually fused into the large plaques which at present can be seen on his arms. At the present time they cover the whole of the extensor and supinator surfaces of both forearms and arms. At various points these plaques have tubercles scattered over them; various white spots also, one-fourth of an inch in diameter, are scattered over these surfaces. Some of these tubercles, but only a few, are analgesic and anæsthetic. On the ulnar sides of the hands, on the portion lying over the outer side of the fifth metacarpal bone, we find analgesia and anæsthesia. No ulceration has occurred since the disease began. The *hands* are only anæsthetic and analgesic as above, but the rest of the cutaneous surfaces of the hands is quite livid and feels unnaturally smooth. Patient has not noticed the brownish discoloration which is present to a small extent on the body and legs. He says that one of the first symptoms of the maculation on his arms was a great heat in them. On the *legs* the maculation is especially marked posteriorly. Some papules are found there, but no tubercles. There is slight anæsthesia there. On the *back* the eruption commenced as a maculation, occurring in annular form, these maculæ gradually fusing together to form the large plaques now present. On the *face* the process began as on the back. In both situations, after a while, tubercles began to form. They are now quite abundant over the malar bones, and over the lower part of the frontal bones. They are less marked upon the back. The tubercles on his forehead give a well-marked leonine expression to his countenance. In the right frontal region especially the tubercles are fused together to form tubercular plates of considerable size. The pigmentation on the face is not as marked or of as deep a brown color as it is on the rest of the body. There is no analgesia or anæsthesia of any of the face-lesions.

The patient's general health is good.

December 14th.—This afternoon patient complained of chilly sensations along the spine; these were followed by a decided febrile movement, which lasted all through the night. No other symptoms. No twitching of the limbs.

December 15th.—Feverish. Remained in bed all day. Some anguish and general rheumatoid pains. No twitching.

December 16th.—Vomited to-day. Anorexia marked. Pains somewhat better. Temperature, 105° F. in P.M. Ordered cathartic.

December 17th.—This morning, temperature 105½° F.; pulse, 130. Marked infiltration of the skin on the right side of the face, especially over the malar bones. The skin is not much reddened, but its surface is hot and it is irregular, from the development of small tubercles and papules, especially about the root of the nose. There is some burning pain in the inflamed parts. Some cough. Examination shows the hard and soft palate in the same condition as is the skin.

December 19th.—Temperature, 105⅝° F. at 12 A.M. Surface of face that is swollen is studded with vesicles and pustules in groups. Sent to the pavilion by Chief of Staff.

December 28th.—Returned from pavilion. The

tubercles from the forehead, ears, and chin have disappeared; otherwise, condition about the same.

January 7, 1881.—Treatment: hoang-nan, gr. ½, t. i. d. Some anæsthetic spots on legs. Sensation is returning to little fingers of both hands. Tubercles of face and ears are very much diminished in size.

January 22d.—Nocturnal emissions, which were rather frequent when he first entered the hospital, have become less common (from five or six to one a week). Tubercles on the face and ears decidedly diminished in size. Anæsthetic spots about the same as before. Tubercles of body unchanged. Treatment: hoang-nan, gr. ½, four times a day. Use of salt meat and alcohol in any form forbidden.

February 5th.—Tubercles of face diminished still more; maculation less apparent. No emission of semen for two weeks. Treatment: hoang-nan, gr. ½, four times a day.

February 19th.—Tubercles still diminishing in size. Fresh groups of pustules on tubercles of the chin and rami of jaws. On the external condyle of right leg is a fresh, irregular patch of tubercles, one and one-half by one inch in diameter. Treatment; stop hoang-nan and use tinct. ferri chlor., ℥ v., t.i.d. Suppuration under nail of second toe, left foot. No injury.

February 22d.—12 A. M., temperature, 104½° F.

February 23d.—Temperature, 101° F. Face is flushed, and he complains of headache and general febrile symptoms again.

February 24th.—12 A. M., temperature, 103¾° F.; pulse, 88.

February 25th.—Temperature, 102½° F.; pulse, 80. Treatment: tinct. aconit. rad., ℥ ij., every two hours. Feels better this morning. Increased swelling of the prominences on the forehead and on the malar bones. Swollen parts have a purplish hue.

February 26th.—Some headache. Tongue furred and yellowish. 12.30 P. M., temperature, 104° F.; pulse, 72, and full; respiration, 26. Skin hot and dry. No fresh tubercles. Says that the numbness of his feet is worse. Treatment: hoang-nan, gr. ⅒, t. i. d.

February 28th.—11 A. M., pulse, 72; respiration, 24; temperature, 102½° F. Perspiring profusely. Says he feels better.

March 1st.—11 A. M., temperature, 103¾° F.; pulse, 76; respiration, 28.

March 2d.—3 P. M., temperature, 103¾° F.; pulse, 80; respiration, 32. Face flushed. Feverish. Very restless at night.

March 3d.—11 P. M., temperature, 103½° F.; pulse, 96; respiration, 28.

March 4th.—12.30 P. M., temperature, 100° F.; pulse, 68; respiration, 24.

March 5th.—11.15 A. M., temperature, 102° F.; pulse, 80; respiration, 24. Complains of sweating at night. The hot and dry skin present a week ago has disappeared, and he feels much better.

March 8th.—Headache, and much perspiration.

March 16th.—On March 10th his fever subsided. During its continuance his hoang-nan was stopped. From March 10th to 15th it was resumed, in one-tenth grain doses t. i. d. No febrile excitement since March 10th. The tubercles of his face are one-third their former size; those on the malar prominences have disappeared; pigmentation also less.

March 26th.—His face is gradually getting cleaner and brighter. The tubercles over the body are generally much less in size, and the maculation is apparently being absorbed without any such atrophy as was noted in the case of Henkle. All over the body the tubercles show signs of absorption. The pigmented surfaces are clearing, the numbness of the arms and legs disappearing. The number of his seminal emissions has diminished to one in four weeks. The parts that were, on January 7th, noted as anæsthetic, are gradually recovering their sensibility.

March 31st.—Improving. Treatment: hoang-nan internally, and ol. chaulmoogra externally.

Through the rest of this year, and the first part of the next, Evans remained in fairly good health. He worked in the open air most of the time. The same treatment was continued, but the condition of his skin did not undergo much change after April, 1881.

January 4, 1882.—Yesterday suffered from an attack of facial erysipelas, involving chiefly left side of face, forehead, eyelids, and cheek. Temperature slightly raised; pulse, 120. General febrile symptoms. Treatment: mask and lot. pb. et opii, and tinct. ferri chlor. internally.

January 15th.—A.M., pulse 120. Fever has been more or less continued ever since last note. The inflammation is now extending over the other side of face. Treatment same; also cinch. sulph., gr. x., t.i.d.; P.M., the other half of the face, nose, ears, eyelids, lips, etc., are involved. Pulse rather feeble. Treatment continued, with whiskey and milk.

January 16th.—Whole face is involved in the erysipelatous inflammation. Pulse, 114, feeble and soft; temperature, 105½° F. in axilla. Treatment: milk diet, moderate stimulation; cinch. sulph., tinct. ferri chlor. internally, and lot. pb. et op. externally. 12 P.M., temperature, 104° Fahr.; pulse, 120, and feeble.

January 17th.—Pulse, 90; temperature, 104°; respiration, 24. Swelling commencing to go down. Treatment: tinct. benzoin co. painted to face; stop lot. pb. et op.

January 23d.—The erysipelas has gradually subsided, leaving him well but very weak. Pulse, 70; temperature, 100½° F. in axilla. Treatment: tonic and stimulant.

January 31, 1882.—No new spots or tubercles have been developed by his erysipelas, nor is there any change in the anæsthetic or numb regions. There is, perhaps, a slight increase in size of the tubercles on his forehead.

Remarks.—Commenting on the subject, Dr. Piffard directed attention to the views entertained by Drs. Fitch and Emersen, of Honolulu, Hawaiian Islands, where leprosy has been seen in abundance. The chief point of interest to which reference was made was the relation of the disease to syphilis. To make the differential diagnosis was very frequently exceedingly difficult. In this connection a letter was read from Dr. Henna, of New York, who had seen considerable of leprosy, and in which mention was made of the great difficulty in distinguishing between the two affections in many cases. Reference was then made to Dr. Fitch's views, who believes that leprosy is simply the *fourth* stage of syphilis. Dr. Fitch is in charge of a large branch hospital for lepers in Honolulu, Sandwich Islands, and from his observations has given the general proposition: "Leprosy is the *fourth* stage of syphilis, which white men are exempt from in the vast majority of cases. When the syphilitic scourge appeared in Europe in the latter part of the fifteenth century and the beginning of the sixteenth, it spread throughout entire Europe, probably infected nearly everybody, and acted as an inoculation itself, so that those who acquired the disease afterward were less liable to its

severe forms; but that where syphilis attacks those who have not been syphilized through their ancestry, the disease may go on to the development of the fourth stage of the disease, or leprosy." Such is Dr. Fitch's general proposition, and he believes that, *without exception*, syphilis precedes leprosy.

Dr. Piffard said that the fact seemed to be that in the Sandwich Islands the great majority of the natives have suffered from acquired syphilis; but that a certain proportion—probably six or seven out of ten—also have leprosy.

There is nothing in either disease which will prevent the development of the other, as has been proved by experiment. He regarded it as not at all surprising that Dr. Fitch had met with cases in which the chief features of the two affections were very much alike. At the same time the history of the cases, as in the case of the Japanese presented, might be unsatisfactory,

Dr. Piffard then read the following questions asked him by Dr. Emerson, and answered them seriatim:

First.—"Do you find any cases of leprosy occurring absolutely without a previous leprosy intimacy, or under circumstances such as forbid you to think it must have come from such intimacy?"

The disease is not contagious in the ordinary sense of the word; that is, is not conveyed by simple contact, but it probably is propagated by blood or some of the secretions gaining access to the circulation and absorbents of an unaffected person. There is but little doubt that leprosy has been propagated by vaccination, and sexual intercourse. There is also but little doubt that it is hereditary. During the last twenty years a good many lepers have been in New York, several have been in hospitals, but the first case of leprosy developing in a *native* of this city has yet to occur. He had known of only two cases developing in the city, and in both of those the patients had previously lived in countries where leprosy existed. As to whether any cases occur absolutely without previous leprous intimacy, he had seen only one, and that occurred in the practice of Dr. H. D. Bulkley, and was declared by Börck, of Christiania, to be genuine.

Second.—"Do you find lepers who have no previous history of syphilis?"

In the majority of cases he had seen, a clear history of syphilis could not be made out.

Third.—"Do you find cases of leprosy occurring in patients previously syphilitic, under such circumstances as to lead you to believe the leprosy comes from the syphilis?"

This question was answered in the negative.

Fourth.—"Do you find any cases or facts that lead you to think that syphilis may change into leprosy?"

The answer was, No; none at all.

Fifth.—"Does not the microscopic pathology of leprosy differ widely from that of syphilis?"

There is no question but what it does.

Dr. Piffard then gave the distinguishing features of the two affections, and concerning the *bacillus leprœ* recently described as the cause of the disease, he believed there was very great doubt as to its being an etiological factor.

He thought that Dr. Fitch was undoubtedly wrong in his view that the two conditions were simply two stages of the same disease, namely, syphilis. The idea that leprosy is nothing more than the fourth stage of syphilis, and that syphilis would develop into leprosy, he thought would not hold for a moment.

In conclusion, he remarked that as our intercourse with foreign nations extends we are getting more and more cases of leprosy, and wherever it gains a foothold it spreads, and therefore he regarded it as important that some means be applied by which persons with the disease could be isolated, be kept together, so as to prevent its spreading.

Dr. A. Jacobi asked, why isolate if the disease is not contagious?

Dr. Piffard said it was well-known that wherever lepers settle there is more or less of the disease found afterward. We do not know the special means of communication, to be sure, but doubtless isolation would reduce the number of cases, as it would syphilis. The weight of evidence seems to be in favor of the view that it is propagated as is syphilis.

Dr. Jacobi remarked that leprosy was not indigenous in this country, but came only as it was imported, and he did not think that fact would necessarily include the isolation of the persons affected. The question was not only practical but theoretical, for in its answer would be included some part of the nature of the disease. Is it contagious, or not? Is there anything in these nodules which can be communicated? He thought it would be a long time before it would be proved that the *bacillus leprœ* was the entity of the disease.

Dr. E. G. Rawson referred to a case which he saw in 1838, several times. It was called a case of leprosy, but there was no evidence that it was contagious. The entire body was covered with large dry scales. Perhaps it was syphilis. He thought it well, however, to keep this class of patients separated from others.

Dr. J. H. Low referred to a case of *lepra* which he had reported in the *Southern Medical Monthly*, and in which the characteristic feature was the formation and dropping off of excessive quantities of large dry scales.

Dr. Piffard was asked if he had seen leprosy occurring before puberty.

He replied that he had seen one case, occurring in a child between nine and ten years of age, and as the result of vaccination.

With reference to the nomenclature of leprosy, there had been some confusion.

The disease described by English writers under the name "elephantiasis Græcorum" is the leprosy of the present day.

There is another affection which Continental writers describe under the name *lepra*, but which is the psoriasis of the present day.

The symptomatology of the two diseases was distinctly given by Hippocrates and others.

In the Old Testament writings reference is made to a disease which has been translated by the word leprosy, and in which the symptomatology is that of elephantiasis G. On the other hand, the Greek word, in the New Testament, translated leprosy is lepra, and the persons called lepers suffered from psoriasis.

Probably the case reported by Dr. Low was one of psoriasis, and also that referred to by Dr. Rawson.

In answer to the question, What is the average duration of leprosy?

Dr. Piffard answered that it was about ten or twelve years Psoriasis, on the other hand, does not shorten life at all.

Dr. O. B. Douglas referred to a case which he recollected as one *said* to be of leprosy, and in that instance the disease was scaly rather than having the appearance of that upon the patient presented by Dr. Piffard. Several of the children inherited

the disease from the father, but so far as he knew the mother was healthy.

The President discussed the subject at some length, with special reference to the differential diagnosis between leprosy and syphilis. Although leprosy, like syphilis, attacks nearly all the tissues of the body, skin, bone, nerve, and the eyes, etc., yet, throwing aside the initial lesion of syphilis and coming to the secondary eruptions, there are sufficient differences between the maculæ, the papules, the tubercles, etc., of the one and those of the other, to establish a differential diagnosis. Again, the anæsthesia is a feature of leprosy and not of syphilis, and the dry necrosis of leprosy differed from the necrosis of syphilis in that the latter was nearly always attended with abundant suppuration.

Dr. Sturgis was of the opinion that in many cases the so-called erysipelas occurring in leprosy was nothing more than true leprous fever. Every fresh outbreak of tubercles is usually preceded by high fever, loss of appetite, etc.

He regarded leprosy and syphilis as two entirely distinct diseases.

With reference to isolation, it had been advocated not so much on account of the question of contagion as for the sake of the patients themselves. Patients with leprosy become absolutely helpless, and as a matter of humanity they need some special provisions for their care. Besides, it seems well established that occasionally it has been conveyed by means of drinking-vessels.

He thought it could not be laid down too strongly that leprous affections are not desquamative. Where there is a marked, scaly eruption the case should always be regarded as extremely suspicious and the closest possible scrutiny exercised with reference to the existence of syphilis.

Dr. Sturgis then directed attention to the beneficial effects produced by chaulmoogra oil, and also the good results obtained by the use of hoang-nan, which relieved but did not cure.

The subject of isolation was further discussed by Drs. Jacobi and Piffard, after which the Society adjourned to meet the *fourth* Monday in September.

Significance of Tube-Casts in Bright's Disease.—Dr. J. S. Richardson, of Philadelphia, in a paper read before the Philadelphia County Medical Society, on January 31, 1882, takes a stand opposed to that held by Charcot and others, in his estimation of the importance to be ascribed to the casts found in the urine. He maintains that the scanty flow that is observed in some forms of Bright's Disease, is accounted for by the mechanical obstructions offered by the casts in the tubes. He also invites attention to what he called "mucous casts," long and branched bodies found when the bladder is irritated. They sometimes have leucocytes attached. The casts shrink in a solution of the acetate of potassa, a diagnostic test for them. Where there is question as to the fatty nature of the granules in casts, Dr. R. suggests the use of an osmic acid solution, which colors them black. Dr. Tyson, in commenting on the paper, sustained the more common theory that hyaline casts are fibrinous in their nature. Dr. Formad advanced his belief that even the hyaline casts may become granular after the expiration of a few days; sometimes they are granular from the presence of bacteria, though this cause did not appear to have been often suspected.—*Philadelphia Medical Times*, May 20, 1882.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, June 6, 1882.

Dr. E. C. Spitzka, President, in the Chair.

Dr. Græme M. Hammond presented a case of

ADDISON'S DISEASE

in a young woman whose sister at the same time was suffering from progressive muscular atrophy.

The patient with Addison's Disease was about twenty-six years of age. She had been suffering for over a year, and had been growing thin and weak. She had occasional remissions. The arms, body, and face were bronzed in different degrees. The nails were non-elastic. The mind was less bright than formerly; the temper irritable.

The sister had suffered from progressive muscular atrophy for about two years. Eighteen months ago she had complete paralysis of the palate, and the muscles of deglutition were markedly impaired. The lips protruded; she soon got tired when talking. The paralysis later invaded the arms and legs. At the present time she falls occasionally when walking. The faradic reaction was normal. The treatment had been static electricity, under which she had markedly improved.

Dr. E. C. Seguin related the case of a young lady with symptoms resembling progressive muscular atrophy. There was a paresis affecting the muscles of the face, the levator palpebræ, the lingual and pharyngeal muscles. Deglutition was difficult. The arms and legs did not suffer at all. The patient was chloro-anæmic. Electrical reactions were normal. The patient improved steadily under strychnia and phosphoric acid. The speaker was unacquainted with progressive muscular atrophy, beginning in the way described by Dr. Hammond, except in children. He had never seen a case occurring in women of the age of Dr. Hammond's cases. He suggested that it might be a case of chronic poliomyelitis.

Dr. Græme Hammond could not admit that diagnosis in his case. He had two cases of progressive muscular atrophy under treatment, of about the same age with the present patient.

A paper was then read by Dr. N. E. Brill, entitled

REPORT OF A CASE OF DESTRUCTIVE BRAIN LESION ACCOMPANIED BY COLOR-BLINDNESS.

The patient in this case was a man who rather suddenly developed brain symptoms. There was anæsthesia and paresis upon the right side, the loss of sensation being more marked than that of motion. The right hand was paretic.

The urine was alkaline and contained pus but no albumen. Tendon reflexes were more marked on the right side.

After a few weeks symptoms of irritation appeared; hyperæsthesia, restlessness, tinnitus aurium, mind not clear. There was slight amnesic aphasia. Color-blindness developed. He could not tell green from red. There was no limitation of the field of vision. Hemiplegia became well marked. Tremors were present. Patient gradually declined in health and died.

Autopsy.—The brain only was examined. The cerebral branches of the carotid and vertebral arteries were found to be healthy. The internal carotids had very rigid walls. Membranes normal. A focus of softening, triangular in shape, was found in the cuneus on the left side. It involved a large part of

that convolution. The line of softening was very sharply marked from the healthy tissue, so that the case was one of very purely localized softening. A diagram showing the lesion was displayed. The reader of the paper then went over the literature of the subject, and gave a critical analysis of previous cases reported.

The paper being open for discussion,

Dr. Hermann G. Knapp said that he was unable to discuss this paper. It was completely at variance with what he knew about the subject. He wished that the reader had mapped out the visual field. It was, he thought, impossible to conceive of a separate centre for color perception. He thought, however, that here was a subject for neurologists to work out.

The paper of the evening was then read by Dr. Leonard Corning. It was entitled

CAROTID COMPRESSION AND PHYSIOLOGICAL BRAIN-REST.

[The paper is published in full elsewhere in The Record.]

The paper being open for discussion,

Dr. Wm. A. Hammond said that while it was necessary to admit the practical facts given by Dr. Corning, he was unable to explain why carotid pressure should check an attack of epilepsy. The primary condition, as we know, in these attacks, is one of contracted vessels and anæmia. Some time ago he had heard of persons stopping fits by putting rubber bands around the neck. But this was for the opposite purpose of checking the venous flow and thus causing congestion.

Dr. L. C. Gray said, in reference to the supposed primary anæmia of epilepsy, that experiments on animals had showed that there was no absolutely constant vascular condition of the brain at that time. So far as the evidence now goes, the vascular spasm is an effect, not a cause.

Dr. Græme M. Hammond related the case of an epileptic child, thirteen years of age, which had an aura, lasting about half a minute. He tried carotid compression on one occasion, with the result of completely stopping the fit.

Dr. M. J. Roberts related several cases in which he had used Dr. Corning's method and instruments successfully.

The first was a case of

CONGESTIVE HEADACHE.

The patient was suffering intensely with severe pain, suffused eyes, etc. A compressor was applied and in forty-five seconds the pain had ceased. The second case was also one of congestive headache, the speaker himself being the sufferer. He applied the truss and in fifteen or twenty minutes he felt relieved and slept.

The third case was one of profuse hemorrhage, following removal of an anterior nasal polypus. The patient was somewhat alarmed. He applied the compressor to the carotid. To his surprise the hemorrhage ceased in one or two minutes.

He had used compression in connection with the administration of ether in ten or twelve cases. In all it seemed to have some decided effect.

The quantity of ether needed was apparently less, and the patients did not struggle so much.

The speaker had used digital compression in the case of a child suffering from convulsions. He was able in this way to control the spasms.

Dr. Corning made a few concluding remarks.

The Society then adjourned.

New Instruments.

A FINGER ELONGATOR.

By JOHN B. RICHARDSON, M.D.,

LOUISVILLE, KY.

On April 8, 1880, I was in attendance upon the case of miscarriage which suggested to me my "finger elongator." Wrote the accompanying article on same and sent it to Dr. Paul F. Mundé, editor of the *New York Journal of Obstetrics*, for publication. October 22, 1880, received answer from Dr. Mundé, stating: "I have been absent during the summer, but your article with diagrams had been sent me by my publishers and later your letter," which had been mailed at same time. He requested me to send the instrument to him, as he wished to test its value before publishing. On March 11, 1881, he again wrote me, apologizing for having lost my instrument. On March 18, 1881, he wrote regretting that "my journal is so full of matter, and it hardly seems fair to ask you to wait till July number of my journal appears for me to publish your article," and advised me to have it published in a weekly journal like The Record. I then sent article to Dr. Geo. F. Shrady, of The Record. He replied under date April, 1881: "Will you kindly send me a model of your 'finger elongator' for examination? If it is as useful as it appears to be I will, with your consent, ask Tiemann or Reynders to manufacture them," etc. On April 3, 1881, Dr. Shrady wrote me: "Tiemann & Co. have made a model of your instrument. Please write to them and ask them to send you one for approval." I was absent for the summer of 1881, in Wisconsin, but whilst there I received of Tiemann & Co. one they had made; this I returned for some alterations. After this I heard nothing from either Dr. Shrady or Tiemann & Co., until April 21, 1882, when the latter wrote me: "The mechanic in whose hands we had placed the instrument for perfection had died of consumption, and that he (Tiemann) had supposed it had been made and sent you long ago. We will make it at once and send for your approval." May 17, 1882, he sent me model. A few days later I returned model to Tiemann & Co. to make further alterations, and wrote Dr. Shrady to publish article. The same day I was surprised to find in the *New York Medical Gazette*, of May 13, 1882, an article by Dr. F. N. Otis, describing an instrument involving the same principle upon which my finger elongator is based. In the latter part of this notice these words occur: "The same appliance promises also to prove of service in removing foreign bodies from the throat, as well as exploration of the uterus."

My instrument, as will have been observed, had been in the hands of Dr. Mundé three weeks prior to October 22, 1880, and in the hands of his publishers some weeks before he received it at their hands, and after that in the possession of Tiemann & Co. from November 12, 1880, and, as he informed me May 17, 1882, "fits my finger exactly, and most all who were here found that it fitted their index finger." It is well known by Mr. Graham Wilder, who made two of my models; Mr. Adolph Fisher, instrument maker, who made my first model; Dr. J. A. Octerlony, who was my counsel in the case of miscarriage which suggested the idea of elongat-

ing the finger to me; by Dr. David Cummins, Dr. John Goodman, Dr. W. W. Senteny, Dr. D. Morton, Mr. Julius Bamberger, and my brother, Samuel B. Richardson, of this city, to whom I exhibited my instrument about July, 1880; to Dr. H. Lyman, of Chicago, who saw it in September, 1881, and Dr. P. F. Mundé, Dr. Geo. F. Shrady, and Tiemann & Co., of New York City, who saw it 1880 and 1881, and know that the idea was an original one and was mine, and would have been published in 1880, but for the fact of the unfortunate delay caused unavoidably by Dr. Mundé and Tiemann & Co. I claim priority for both the idea and its practical application. The following is the article sent to Dr. Mundé in 1880 and Dr. Shrady in 1881, and bears date of July, 1880.

JOHN B. RICHARDSON.

LOUISVILLE, KY., June 1, 1882.

Feeling the want of some means or mechanical device, by which the index or "searching" finger might be elongated, thereby enabling us to make deeper digital examinations than the length of the natural finger permits, and at the same time allow the extremity of the finger to receive impressions made upon the terminal end of such instrument, the following described contrivance suggested itself, some time since, during my attempts at the removal of a remaining portion of the "secundines," in a case of abortion, at the end of the second or beginning of the third month of gestation, the loss of blood being so great before I reached the patient as

Fig 1.

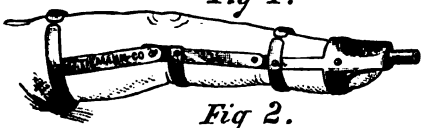


Fig 2.

to jeopardize her life, her pulse at the wrist being lost, and her respirations much "slowed," sighing, and irregular. More than twenty years ago, I had seen an instrument used by my father—the late Dr. Samuel B. Richardson of this city—to remove portions of "membranes" remaining, which could not be reached by means of the unaided finger; it was composed of a small copper wire, curved upon itself, and of the proper length and strength, as to enable him to introduce it into the uterine cavity, by holding the lower ends between his thumb and index finger, very carefully and gently remove the portions of membranes and blood clots which remained and were keeping up the hemorrhage. As will be observed from the accompanying cuts (Figures 1 and 2) the instrument consists of two parts or pieces. The first part is composed of a very thin silver cap or thimble, which should accurately fit the contour of the end and sides of the finger upon which it is to be used, a plaster cast of the finger being first taken, then a metal mould from this "cast," upon which metallic form the silver finger cap is perfectly fitted; passing from the lower border of the thimble are two thin and narrow lateral metallic pieces, of proper length to reach beyond the second joint of finger, having artificial joints opposite the true joints of finger. These lateral metallic pieces are held together and made to embrace the finger by steel bands or rings, which surround the finger at points midway between the first and second and second and third phalangeal articulations.

Upon end of finger-cap or thimble there is placed a receptacle into which can be secured, by means of screw, any of the attachments to be hereafter mentioned.

The *second* part consists of a small silver, copper, or steel wire, so curved upon itself as not to injure, during its employment, any of the tissues with which it comes in contact; when made of copper wire, it can be changed to any curve desired.

Having adjusted the instrument accurately upon the finger, you will find, after a little practice, all degrees of pressure, made to impinge upon the terminal extremity or sides of any of the attachments used, are immediately transmitted back upon the sensitive end of the finger through means of the cap or thimble; so accurately is this done, that the terminal end of the artificially elongated finger is only surpassed, in its delicacy of appreciation of touch, by the true end of the natural finger, thus enabling the accoucheur to remove all coagulæ or portions of the secundines remaining within the uterine cavity, which are beyond the reach of the unaided finger, and yet not injure the uterine structure.

Nor is this little instrument limited to the use above pointed out, for removing the incurvated wire attachment, by unscrewing it from receptacle in end of finger cap, you can screw firmly in its stead the stem of a "Sims' uterine replacer," and by its use rectify a displacement of the organ, more fully appreciating both the extent and degree of force exerted whilst using "Sims' replacer," grasped between the thumb and fingers at the end of its long handle; or a Thomas' dull wire-curette can be attached for rupturing enlarged follicles within the uterine cervix, which have undergone cystic degeneration.

Further, the Sims' stem can be removed and an uterine applicator secured in its place, with which any intra-uterine application can readily be made after dilating cervix; or a stem, with an eye in its distal extremity, can be used after threading with silk or wire, thus enabling the operator, with much greater facility, to pass it around the pedicle of an intra-uterine polypus or pedunculated tumor.

Another use, it occurs to me, to which it might be adapted is after elongating finger by incurvated steel wire (flattened) attach to its extremity one of "Emmet's enucleators," with serrated edge, for removing fibrous intra-uterine growths.

The curved wire might materially aid the surgeon in his searchings for the location of a calculus in the bladder, through the urethra, after it has been forcibly dilated, in the female; or through the incision made in the operation of lithotomy, in the male; or a vertebrated or other probe attached to the "cap," would enable one to more accurately and safely explore a deep and tortuous sinus or some deeply imbedded foreign body—a Nélaton porcelain tip placed on probe in searching for leaden missiles.

The instrument I possess was kindly made for me by my friend, Graham Wilder, Esq., of this city, to whom I am indebted for some practical suggestions toward improving the usefulness of the instrument, one of which is to use two narrow, metallic ribbons, with artificial joints placed opposite joints of the finger, as a substitute for finger cap or thimble.

July, 1880.

DR. KEITH, it is said, has sent his son to this city to finish his gynecological education.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 25, 1882, to July 8, 1882.

By direction of the Secretary of War, the Medical Examining Board, convened in New York City by S. O. No. 223, October 30, 1877, from A. G. O., is dissolved, to take effect June 30, 1882, and the following named officers now members of the board will report by letter to the Surgeon-General:

Major JOSEPH B. BROWN, Surgeon.
Major JOSEPH H. BILL, Surgeon.
Major CHARLES H. ALDEN, Surgeon.
S. O. 147, A. G. O., June 26, 1882.

DELOFFRE, A. A., Capt. and Asst. Surgeon. Relieved from further duty at Ft. Wallace, Kans., and assigned to duty at Ft. Sill, Ind. Ty. S. O. 124, Dept. of the Missouri, June 21, 1882.

GARDNER, E. F., Captain and Asst. Surgeon. Relieved from duty at Vancouver Barracks, W. T., and assigned to duty as Post Surgeon at Fort Cœur d'Alene, Idaho. S. O. 83, Department of the Columbia, June 19, 1882.

BANISTER, J. M., 1st Lieut. and Asst. Surgeon, when relieved by Asst. Surgeon DeLoffre, to proceed to camp of 9th Cav., near Cantonment on the Uncompahgre River, Colo., and report to the Com'd'g Officer for duty. S. O. 124, Dept. of the Missouri, c. s.

O'DONNOGHUE, F., Captain and Medical Storekeeper. Died at New York City, June 29, 1882.

HEAD, JOHN F., Lieut.-Colonel and Surgeon. Granted leave of absence for fifteen days. S. O. 153, A. G. O., July 3, 1882.

Under the provisions of Section 1 of the Act of Congress, approved June 30, 1882, the following named officers are, by operation of law, this day retired from active service, viz.:

Brig.-Gen. JOSEPH K. BARNES, Surgeon-General.
Colonel JOHN M. CUYLER, Surgeon.
Colonel WILLIAM S. KING, Surgeon.
Lieut.-Colonel JAMES SIMONS, Surgeon.
S. O. 151, A. G. O., June 30, 1882.

Medical Items and News.

ARTIFICIAL QUININE.—M. E. J. Maumene claims to have achieved the artificial synthesis of quinine, and has deposited a sealed packet describing his process with the French Academy, pending physiological tests of its genuineness. Much incredulity exists regarding his claims.

CONTROLLING QUININE.—A great combination of the quinine manufacturers abroad has been formed, for the purpose, it is stated, of controlling the market of the United States.—*Monthly Review of Medicine.*

GONORRHŒA OF RECTUM.—Dr. Morris, of Baltimore (*Maryland Medical Journal*), reports a case of gonorrhœa of the rectum in a lady; did not arise from unnatural practices. The symptoms were pain, spasmodic contraction, formication, etc. The treatment consisted in applying nitrate of silver thoroughly to the everted rectal mucous membrane.

DR. FOTHERGILL, who has seen the bacillus of tubercle imported on slides from Germany, writes a lively and satirical description of the same to the *Philadelphia Medical Times.*

THE GIFT OF DR. TONER'S LIBRARY TO THE NATION.—Dr. Joseph M. Toner, of Washington, has donated his library to the United States, the entire collection of books, pamphlets, manuscripts, and periodicals, amounting to between 20,000 and 25,000 volumes. The learned and laborious donor has been known for a quarter of a century past as a most intelligent and indefatigable collector, and his library is rich in American history, biography, topography, medical science, and scientific and miscellaneous literature.

THE NEW YORK CODE.—*Resolved*, That the Queens County Medical Society, in convention assembled, utterly repudiate section second of the revised Code, and will not be governed by it.

Resolved, That the secretary furnish a copy to the delegates at the American Medical Association and instruct them to present it to that body at its meeting at St. Paul, Minn. That our delegates to the State Society be instructed to use their influence for the repeal of the same at the State Society next meeting.

Resolved, That a copy be sent to THE MEDICAL RECORD, *The Philadelphia News*, and other medical journals for publication.

At the annual meeting of The Lewis County Medical Society, held at the Court House in the village of Lowville, N. Y., on motion of Dr. Alex. H. Crosby, the following resolutions were unanimously adopted:

Resolved, That the delegate from this society to the New York State Medical Society is hereby instructed to use all honorable means in his power to have the "New Code," adopted at the last meeting of the State Society, repealed; and further, that he shall endeavor to have a committee appointed to confer with leading members of the medical profession in every county of the State, as to their views in relation to any changes advisable to be made in the "By-laws" and "Code of Medical Ethics."

Resolved, That the above be published in the *Medical News*, and MEDICAL RECORD.

NATIONAL BOARD OF HEALTH.—The House Committee on Appropriations has agreed to insert in the Sundry Civil Appropriation bill a clause restricting the operations of the National Board of Health to the diseases of yellow fever and cholera. The amount of the board's appropriation has been cut down so that, if the appropriation bill is passed as recommended, the publication of the *Bulletin* will have to be suspended. This will be much regretted.

A POST GRADUATE SCHOOL has been established in this city. The arrangements have not yet been entirely completed.

PROFESSOR NOTHNAGEL has been called to Vienna, to take the chair occupied by the late Prof. Duchek.

LEUCOCYTHÆMIA IN INFANTS.—Professor Senator has recently presented an exceedingly interesting case of twins, girls, one year and five months old, who were affected with genuine splenic leucocythæmia, a fact established by means of a computation of the blood-corpuscles, and rachitis.

IN MEMORIAM.—The *St. Louis Courier of Medicine* for June contains a large number of memorial resolutions by various societies upon the death of Dr. Hodgen. All show how much he was admired living, and how profoundly his loss is mourned.

Original Communications.

CASES TREATED WITH PHENIC ACID (DÉCLAT).[1]

By L. M. YALE, M.D.

The claims urged by Dr. Déclat for his preparations of phenic acid are probably familiar to all the members of this Society. During and since the visit of Dr. Déclat to this city, a few cases have been treated after his plan at Bellevue Hospital. The following cases were treated by Dr. A. J. Magnin, House Surgeon of the Second Surgical Division: one is a case of pyæmia, treated during the service of Dr. Weir; one a case of high temperature (probably septic) attending compound fracture, complicated by delirium tremens, treated during my own service; and the remainder are cases of erysipelas, treated by Dr. Magnin in the detached erysipelas service. With the exception of one case of puerperal septicæmia, one of erythematous erysipelas and one of lymphangitis, all were successful in result. These are all the cases treated in the Hospital, strictly according to Dr. Déclat's method, of which I am aware. Some cases have been treated partially or imperfectly. I have not considered these, because it seems only fair to any plan of treatment or its proposer that the method should be strictly followed.

Having understood that some of my fellow-members had employed this method to some extent, I have thought it worth while to present these few cases in order to draw out their experience.

The essential claim of Dr. Déclat is that the well-known toxic symptoms that follow the internal use of carbolic acid are due less to the drug proper than to impurities very frequently present, notably cresylic and rosacic acids and rosaline; and that in making a perfectly pure acid and preparations of it, he renders possible the internal administration of carbolic or phenic acid to the degree necessary to obtain its antiseptic effect in the system against the supposed disease-ferments.

To carry out the plan of treatment in such cases as follow requires the constant supervision of a medical man or of a very intelligent nurse, as the indications followed in these cases for the administration of the drug hypodermically was the temperature. The preparations used were a "syrup of nascent phenic acid," each half-ounce representing 2½ grains of the acid. A "syrup of ammonia-phenate," each half ounce containing 2½ grains of the ammonia-phenate. Hypodermic solutions of the nascent acid and of the ammonia-phenate, each of the strength of 2 grains to 100 minims. Also "glycophenique," a ten per cent solution in glycerine.

The injections were given warm and introduced into the subcutaneous cellular tissue. When this detail was observed, no inconvenience followed in any instance. On a few occasions attendants, unfamiliar with this point, gave the injections and abscesses resulted.

Case I.—*Compound fracture of leg—Amputation—Pyæmia—Recovery.*—Pietro D'Astee, aged twenty-five; Italy; laborer. Admitted December 12, 1881, to Ward 9. Patient was brought to city by train from Haverstraw, where he was employed, working as a laborer on the railroad. An embankment had given way, and he had been struck on the right leg by a heavy mass of falling stones and earth.

Examination.—Both tibia and fibula were fractured about 2½ inches above the ankle (right leg). A large lacerated wound situated on the outer side of the limb communicated with the site of fracture. There was some comminution, but the fragments were not displaced nor loose. The wound was rendered as aseptic as possible; drainage-tubes were inserted in such a manner as to insure evacuation of all discharge, and a full Lister dressing was applied. The limb was then placed in a fracture-box.

December 14th.—Temperature, 101°. Discharge has come through. Dressing was renewed. Wound looks well. There is a large contused surface on inner side of leg, which looks as if it were going to break down and leave a large slough.

December 20th.—Since last account there have been variations of temperature from 100° to 104°. There is no reaction in the wound. A large slough has formed on the inner side. The foot is very œdematous and discolored. Several of the fragments have become loose and were removed. Frequent dressing, quinine, etc., do not control the temperature nor improve the condition of the patient. Pulse, 140, feeble and compressible. Sordes over teeth and lips. Has had considerable diarrhœa and profuse sweats. Lister is abandoned and open treatment resorted to, the wound being washed out with Bals. Peruv. four or five times daily.

December 24th.—Condition of the patient worse. The wound is one large slough. No reaction. Foot more swollen and discolored. Patient had a marked chill this A.M. Range of temperature from 99½° to 104½°. Appearance of bed-sore over sacrum.

December 26th.—Leg amputated by Dr. Hartley. Open treatment resorted to. Transferred patient to Sturgis' Pavilion.

[The chart notes taken hourly from the day of amputation, December 26, 1881, to January 10, 1882, when the phenic acid treatment was instituted, give an unmistakable picture of pyæmia. The temperature averaged 102½° to 103° F., the highest noted being 105½° F., with two or three remissions. Once it was noted to be subnormal. In spite of the use of quinine, full diet, and the most vigorous stimulation, the condition became progressively worse. The history continues.]

January 10th.—Since last account symptoms have rapidly increased in severity. Patient had a marked chill on the 2d inst., also on the 5th, and a less distinct one on the 10th. Pulse is very feeble and rapid, despite active stimulation; countenance is anxious; teeth and lips covered with sordes; tongue brown and dry; stupor and muttering delirium are present. The stump is dry; no signs of granulations. Has had diarrhœa at intervals. The skin is of a dingy, yellow hue. The bed-sore over the sacrum is very extensive, and covered with large, deep sloughs. Other sores have appeared over the crest of the ilium and trochanter on the left side. The patient has exhaustive sweats. It was decided on January 11th to transfer the case to a *medical* ward, the symptoms, according to Dr. Weir's opinion, pointing unmistakably to pyæmia. A fatal prognosis is given by Dr. Weir and confirmed by Dr. James R. Wood, who was called in consultation.

January 11th, 6 P.M.—Patient put under full Déclat treatment. Ordered 100 gtt. ammon. phenat., hypodermically, q. 4 hr.; Syrup ammon. phenat.,

[1] Read before the New York Surgical Society, May 9, 1882.

℥ ss. q. 3 hr.; ℥ j. whiskey, q. 1 hr.; Tr. ferri chlorid., 34½ ♏xv. q. 3 hr.; Tr. digitalis, ♏v. q. 4 hr. Stump and bed-sores dressed with olive oil and glyco-phenique, equal parts, q. 12 hr. Ordered urine to be examined q. 12 hr. for sulphates. The hypodermics are to be warmed and injected carefully into the cellular tissue over chest and abdomen.

January 12th.—6 A.M.: Temperature, 103°; pulse, 128°. 12 M.: Temperature, 102°; pulse, 130°. 6 P.M.: Temperature, 103°; pulse, 110°. Same orders have been carried out. An extra injection was given during the morning and in the evening.

January 13th.—1 A.M.: Temperature, 99°; pulse, 120°. 11 A.M.: Temperature, 98¼°. Same orders repeated. There is no change in the condition of the patient. The stump and bed-sores have not improved in appearance. The pulse is yet rapid, but somewhat firmer. 4 P.M.: Temperature, 100°. 6 P.M.: Temperature, 100¼°. 9 P.M.: Temperature, 100¼°. Pulse, 9 P.M.: 104°.

January 14th.—1 A.M.: Temperature, 102°. Hypodermics to be given q. 2 hrs. till further orders. 6 A.M.: Temperature, 100¼°. 10 A.M.: Temperature, 101°.

The patient is stupid. No change in the condition of the wounds. Seems to experience some pain over points where injections have been given. Pulse, 130, and very feeble. No chill. Profuse sweats. Hypodermics continued, q. 2 hr. Other orders repeated. 6 P.M.: Temperature, 100°.

January 15th.—6 A.M.: Temperature, 101°. Same orders carried out. No improvement, except that the pulse is stronger (100). 6 P.M.: Temperature, 100°; 11 P.M., 100½°.

January 16th.—5 A.M.: Temperature, 99½°; 12 M., 100°; 6 P.M., 99½°. This P.M. sulphates are absent from urine, which is quite dark in color. Hypodermics to be given q. 4 hr. only. Other orders repeated.

January 17th.—5 A.M.: Temperature, 99½°; pulse, 112. 12 M.: Temperature, 100°. 6 P.M.: Temperature, 100°; pulse, 100. The pulse is stronger. Patient seems to be delirious still. Has one normal passage, copious, every A.M. Sulphates are still absent.

January 18th.—1 A.M.: Temperature, 99½°; 12 M., 99°. Sulphates have reappeared. Tongue is less coated than six days ago. Sweats less profuse. No change in the appearance of wounds, except that the sloughs over sore of the sacrum are clearing. 6 P.M.: Temperature, 99½°.

January 19th.—6 A.M.: Temperature, 99°. 10 A.M.: Temperature, 100½°; pulse, 100. The patient is less stupid. There is some discharge from the stump. Pulse still feeble. Orders the same. 11 P.M.: Temperature, 100°.

January 20th.—3 A.M.: Temperature, 99½°; 6 A.M., 99½°; 8 P.M., 100°; 11 P.M., 101°. Hypodermics to be given q. 3 hr. Syrup, whiskey, iron, and digitalis as before.

January 21st.—6 A.M.: Temperature, 99°; 10 A.M., 100°; 6 P.M., 100°. Hypodermics have been given only q. 4 hr. since morning.

January 25th.—Since last account temperature has been continuously between 99° and 100°; pulse between 100 and 120. The sordes are disappearing. There is considerable discharge from the stump, where granulations are appearing. The bed-sores are free of sloughs. Digitalis is discontinued. Hypodermics given q. 4 hr. Syrup ammon. phenate, q. 4 hr. Whiskey and ferri chlorid. as before.

February 1st.—It is considered safe for the patient to return to a surgical ward. The bed-sores are beginning to heal; the stump is granulating; the tongue is pink and moist. Pulse between 80 and 100; regular and quite strong. The glyco-phenique is replaced by iodoform dressings. Hypodermic ac. ph. to be given q. 6 hr. Syrup ammon. phenate, ℥ ss. q. 6 hr.; whiskey, ℥ j. q. 2 hr.; tr. ferri chlorid., ♏. xv. t. i. d.

February 6th.—Injections are discontinued. Syrup continued.

At the present time the patient's condition is as follows: Stump healed; bed-sore upon the sacrum, which was twice as large as the palm of the hand, now about the size of a dollar. Appetite excellent, not to say voracious. Has been sitting up daily for some time. One afternoon, about two weeks since, the patient was noticed to be ill. He speaks no English, and made no complaint. He seemed dull, and his temperature was 104°. His urine was found to contain an abundance of albumen. This had never before been detected. The next day the fever had disappeared, and the patient returned to his usual condition. With the exception of the continued presence of albumen in the urine, although in somewhat diminished quantity, the favorable progress of the patient seems to have not been interrupted. Whether the albuminuria has any connection with the previous treatment is not known. During the time it was carried out no albumen was found.

Two points are worth noting in this case. First, the rescue of the patient from what seemed impending death from pyæmia. Secondly, the amount of phenic acid tolerated. From the morning of January 14th until the evening of January 16th—two and one-half days—he received hypodermically 2 grains of ammonia-phenate every two hours, or 24 grains per diem. In addition, he took by mouth, in the syrup, 22.4 grains per diem, or 46½ grains per diem in all. At the end of these two and a half days the urine gave warning of approaching toxic symptoms, and the dosing was diminished.

CASE II.—*Compound fracture of tibia, and simple fracture of tarsus—Delirium tremens—Death.*—Frank Martin, 13 Madison Street; single; aged twenty-two; Ireland; driver. Admitted to Ward 9, April 3, 1882. At the time of admission patient was intoxicated. Afterward he stated that he had been on a spree; also that he was in the habit of drinking steadily. Apart from his alcoholism the general condition of patient was good. His urine was normal.

Examination.—There is found to be a fracture of the left tibia at about the junction of the middle and lower thirds of its shaft. The line of fracture is very transverse, and there is no comminution. On the upper and inner aspect of the leg is a wound that leads down to the point of fracture. The wound in the skin is rather clean cut, but the deeper tissues are a good deal lacerated. There is a great deal of swelling around the right ankle, which renders the diagnosis rather obscure. On some motions, deep-seated crepitus can be elicited, and a fracture of one of the bones of the tarsus is considered probable. There is doubtless some synovitis at the ankle, giving rise to swelling, fluctuation, and very intense pain and tenderness. The patient was injured by falling from the front platform of a street car; the wheel of the car passing over his right foot and left leg.

Treatment.—The left leg and wound in same were thoroughly washed with a five per cent. solution of carbolic acid, the fragments put in good position, and the leg put up in a Lister dressing, and placed in a fracture-box, a drainage-tube having been in-

serted in the wound. *The right leg* was put in a fracture box, and hot lead and opium wash kept over the ankle. Patient was ordered whiskey, ʒ ss. q. 3 hr., and potassi. bromide, ʒ j.

April 4th.—To-day patient having come out of his intoxication, feels very well. His leg was dressed this A.M., and it is looking healthy. There is swelling, and the bones are in good position. Temperature, 100½°. No cause for the pyrexia can be found in the compound fracture. Patient ordered a dose of salts to move his bowels.

April 5th.—Patient's condition remains about the same. His temperature continues high. To-day it is 102°. His right ankle is more swollen and painful. It is thought that patient's high temperature may be due to the synovitis. An apparatus was arranged which keeps a stream of cold water continually playing over his right ankle. About an hour after this was applied his temperature fell to 100½°, being one and one-half degree lower. It did not, however, remain down long, and by 4 P.M. his temperature reached 103°. His leg was dressed, but the temperature, instead of falling, rose higher.

April 6th.—This A.M. patient's temperature was 103°, having been higher during the night. He has had large doses given him of quiniæ, but these have failed to reduce temperature. As yet he seems to feel quite well, and does not complain of any particular pain, except in his right foot. This afternoon his leg was dressed, and a slight prominence was found on the upper aspect of the leg opposite the site of fracture. A hypodermic needle was introduced, and a small quantity of ichorous fluid was drawn off, which proved to be bloody serum, containing a very few pus-cells. At 6 P.M. his temperature was 104½°. Patient was ordered 100 minims of phenic acid, q. 4 hr.; whiskey, ʒ ss. q. 2 hr.

April 7th.—Patient's temperature is still high, not having been below 104° since yesterday P.M. His leg was dressed this P.M., and more drainage made. One tube was put in a sinus which ran down on the inner side of the leg, and was brought out through a counter-opening pretty well underneath. The second tube was carried from the upper part of the leg downward and outward, so as to drain the small cavity which was aspirated yesterday. The patient was very restless and excitable in the latter part of the day, and became by midnight quite delirious.

April 8th.—Temperature this A.M. was down to 101½°, but it soon rose again, and at noon was 103°. Patient's delirium still continues, and during evening he becomes so violent that he has to be tied in bed. Ordered bromide potassii, large doses.

April 9th.—Temperature this A.M., 103¾°. He is still given 100 minims acide phenique, q. 4 hr. His delirium has changed in its character, and now is confined to general mutterings, though occasionally he becomes violent as before. His leg was dressed this P.M., and the appearance of it was found about the same. It drains perfectly and looks well. The siphon, which had been playing cold water on his right foot, was stopped to-day, and the foot was placed in a fracture-box.

April 10th.—This morning the patient's temperature had fallen to 102°, and at noon was down to 100½°. His muttering delirium continued, and he seemed to be a good deal weaker than on yesterday. His stimulants have been increased to ʒ ss. every hour. A small spot of consolidation was discovered this morning in the apex of his right lung. No ralês could be heard. There is some dulness and an indistinct bronchial respiration.

April 11th.—Temperature since yesterday has remained low. It reached 102° at midnight, but has not been above that point, and at 6 A.M. to-day it was 101¼°. It continued low till 9 P.M., when it suddenly rose to 105½°. The patient has become very much weaker and has pulmonary œdema.

April 12th.—The patient died at 5.30 this A.M., with a very weak heart and pulmonary œdema. No autopsy could be obtained.

The next case is one of erysipelas, in which, on one day, at least (January 25th), the fall of temperature seemed due to the use of phenic acid. A similar apparent effect may be noted in Case IV., on January 15th.

CASE III.—*Erysipelas—Recovery.*—John Munns, aged fifty-five; England; clerk. Admitted January 23, 1882. On night of 22d had chill, vomiting, fever, and swelling of face. At 4 P.M., January 23d, he felt so ill that he decided to come to hospital. 6 P.M.: Temperature, 104°. Given hypo. ammon. phenat., 100 gtt. Ordered syrup ammon. phenat., ʒ ss. q. 3 hr.; also whiskey, ʒ ss. q. 3 hr. 11 P.M.: Temperature, 103½°; hyp. ammon. phenat., 100 gtt., as before.

January 24th.—3 A.M.: Temperature, 101¼°; hyp. as before. 7 A.M.: Temperature, 101°; hyp. as before. 10 A.M.: Temperature, 102½°; hyp. as before; syrup and whiskey continued as before. 3 P.M.: Temperature, 102¼°; hyp. am. ph., 100 gtt. 6 P.M.: Temperature, 103°; hyp. am. ph., 100 gtt. Face was painted on admission with tr. benzoin co., and a mask of sheet lint wet in lead and opium wash was applied. 10 P.M.: Temperature, 101¼°; hyp. as before.

January 25th.—2 A.M.: Temperature, 101°; hyp. as before. 6 A.M.: Temperature, 99°; hyp. as before. 10 A.M.: Temperature, 99°; hyp. as before. Syrup as before; whiskey increased to ʒ ss. q. 2 hr. Pulse, 120, and rather feeble. The patient's face, neck, and scalp are enormously swollen and very painful. 2 P.M.: Temperature, 104°; hyp. as before. 4 P.M.: Temperature, 102½°; hyp. as before. 6 P.M.: Temperature, 100°; hyp. as before. 10 P.M.: Temperature, 101°; hyp. as before. Ordered bromide (1-4) ʒ ii. q. 4 hr. Patient is restless, but not delirious. Complains of some soreness at the point where injections were given.

January 26th.—2 A.M.: Temperature, 101°; hyp. ac. ph., 100 gtt. 6 A.M.: Temperature, 99°; hyp. ac. ph., 100 gtt. 10 A.M.: Temperature, 99¾°; hyp. ac. ph., 100 gtt. The swelling is beginning to abate. The patient complains less of pain. Scalp is still very œdematous and tender. Pulse, 106. Weak. Whiskey and syrup continued as before. 2 P.M.: Temperature, 102°; hyp. ac. ph., 100 gtt. 6 P.M.: Temperature, 101°; hyp. ac. ph., 100 gtt. 10 P.M.: Temperature, 99°; hyp. ac. ph., 100 gtt.

January 27th.—2 A.M.: Temperature, 100°; hyp. ac. ph., 100 gtt. 6 A.M.: Temperature, 98¼°; hyp. ac. ph., 100 gtt. 10 A.M.: Temperature, 99°; hyp. ac. ph., 100 gtt. Patient feels quite comfortable. Pains have disappeared from face, neck, and scalp. Swelling and redness are detected with difficulty. 12 M.: Temperature, 99½°. 4 P.M.: Temperature, 100°; hyp. ac. ph., 100 gtt. 8 P.M.: Temperature, 99°; hyp. ac. ph., 100 gtt.

January 28th.—1 A.M.: Temperature, 98¼°; hyp. ac. ph., 100 gtt. 6 A.M.: Temperature, 98½°; hyp. ac. ph., 100 gtt. 10 A.M.: Temperature, 98¼°; hyp. ac. ph., 100 gtt. The swelling has completely disappeared.

Patient says that he feels perfectly comfortable, although weak. 2 P.M.: Temperature 99°; hyp. ac. ph., 100 gtt. Syr. ac. ph. ordered, ʒ ss. q. 4 hr.; whiskey, ʒ ss. q. 3 hr. Patient has a small fluctuating tumor on left thigh, at a point where a deep injection of 100 gtt. phenate of ammonia was given. No heat nor redness. An aspirator needle introduced, and about ʒ ii. pus withdrawn. 6 P. M.: Temperature, 98½°; hyp. ac. ph., 100 gtt.

January 29th.—10 A.M.: Temperature, 98½°. Hypodermics are discontinued. Whiskey and syrup as before.

February 3d.—Temperature has been normal since last account. There has been no further trouble from the abscess in the thigh. There remain one or two spots of induration over the abdomen; but they are not painful and are rapidly disappearing. Syrup discontinued. Ordered quinine sulph. gr.v., t. i. d. Ordered whiskey, ʒ iv. q. 24 hr. During treatment, usual examination of urine was resorted to q. 4 hr. Sulphates never absent

February 5th.—Patient discharged, cured.

CASE IV.—*Erysipelas.*—W. H. Lonsberg; aged forty-five; U. S.; clerk. Admitted January 13, 1882. Patient says that two days previous to admission, he had vomiting. The next day he suffered from chilly sensations and some burning of the face. On morning of the 13th his face was red and swollen, and his eyelids œdematous and almost closed. He decided to come to hospital. 5 P.M.: His face is swollen and red, the œdema extending to the scalp. Temperature, 101°; pulse, 121. Hypodermic injection ac. phenique (2½%) of 100 gtt. Ordered syrup ac. phenique, ʒ ss. q. 3 hr.; also whiskey, ʒ ss. q. 3 hr. Face painted with tr. benzoin co., and a mask wet in lead and opium wash applied. 7 P.M.: Temperature, 102°; 10 P.M., 102½°; hypo. injec. of ac. ph. (2½%), 100 gtt.; syrup to be given at 11 P.M. and 1 A.M. Immediately after injection patient complains of feeling of dizziness and nausea, which passes away, however, in about one minute.

January 14th.—1 A.M.: Temperature, 101¼°; 6 A.M., 99°; 10 A.M., 101¼°; 100 gtt. ac. pheniq., hypodermically; same orders for syrup and whiskey as before. 12 M.: Temperature, 101¼°; 1.30 P.M., 102¼°; 3.30 P.M., 103°. 4 P.M.: Hyp. inject. of ac. ph., 100 gtt. 6 P.M.: Temperature, 102½°; 12 P.M., 103°.

January 15th.—6 A.M.: Temperature, 102¾°; hyp. injec. ac. ph., 100 gtt. 12 M.: Temperature, 101½°. 2 P.M.: Temperature, 103°; hyp. injec. of ac. ph., 100 gtt. Syr. ammonia phenat. is substituted for the syrup of ac. phenique. Whiskey, ʒ ss. q. 3 hr. The swelling and redness of the face are disappearing. Patient complains of some soreness at the point where hypodermics have been given. A certain amount of induration is detected, but no heat or redness. 6 P.M.: Temperature, 102½°; hyp. ac. ph., 100 gtt. 10 P.M.: Temperature, 103½°; hyp. ac. ph., 100 gtt. 12 P.M.: Temperature, 100¼°.

January 16th.—2 A.M.: Temperature, 100°; hyp. ac. ph., 100 gtt. 6 A.M.: Temperature, 99½°; 10 A.M., 98½°. The blush and swelling have completely disappeared. Patient complains of no pain, except at the point where injections were made. 2 P.M.: Temperature, 100½°; hyp. ac. ph., 100 gtt. Whiskey and syrup continued as before. 4 P.M.: Temperature, 101°; 5 P.M., 100½°; hyp. ac. ph., 100 gtt. 9 P.M.: Hyp. ac. ph., 100 gtt.

January 17th.—1 A.M.: Temperature, 99°; hyp. ac. ph., 100 gtt. 10 A.M.: Temperature, 98½°; hyp. ac. ph., 100 gtt. Lead and opium applied to points of tenderness where injections had been made. Whiskey and syrup as before. 3 P.M.: Temperature, 100¼°; hyp. ac. ph., 100 gtt. 9 P.M.: Temperature, 99°; hyp. ac. ph., 100 gtt.

January 18th.—1 A.M.: Temperature, 98½°; hyp. ac. ph., 100 gtt. 5 A.M.: Temperature, 98¼°; hyp. ac. ph., 100 gtt. 10 A.M.: Temperature, 101°; hyp. ac. ph., 100 gtt. Pain in abdomen is disappearing. Patient complains of throbbing pain in head. Scalp œdematous. Whiskey and syrup as before. 5 P.M.: Temperature, 104°; hyp. of phenat. of ammonia, 100 gtt. 8 P.M.: Temperature, 100°; hyp. of phenat. of ammonia, 100 gtt. 10 P.M.: Hyp. of phenat. of ammon., 100 gtt.

January 19.—1 A.M.: Temperature, 99°; hyp. acide phenique, 100 gtt. 5 A.M.: Temperature, 99°; hyp. ac. ph., 100 gtt. 10 A.M.: Temperature, 99°; hyp. ac. ph., 100 gtt. Whiskey and syrup as before. No more hypodermics are given. 3 P.M.: Temperature, 100°; 8 P.M., 99°

January 20th.—1 A.M.: Temperature, 98½°; 10 A.M., 98½°. Syr., ʒ ss. t. i. d. Whiskey, ʒ i. t. i. d.

January 24th.—Since last account temperature has been normal. Syrup discontinued. The pain over points of injections has disappeared. During ac. ph. treatment, urine was examined q. 12 hr. with barium chloride and nitric ac. test. Sulphates always abundant. Patient discharged, cured.

CASE V.—*Erysipelas of wound—Normal temperature in two days.*—John Hargent, aged fifty-two; England; 'longshoreman. Transferred from Ward 9, January 18, 1882. The patient was admitted to Ward 9, January 16, 1882, suffering from fracture of the nose and lacerated wounds of face. Erysipelas developed, and he was transferred to pavilion.

January 18th.—10.40 A.M.: Temperature, 101° F.; pulse, 100. 12 M.: Given hyp. injec. ac. ph., 100 gtt. Ordered syrup ac. phenique, ʒ ss. q. 3 hr.; also whiskey, ʒ ss. q. 3 hr. A light dressing soaked in glyco-phenique, one part, to olive oil, three parts, placed over wounds. 5 P.M.: Temperature, 102°; hyp. ac. ph., 100 gtt. 8.30 P.M.: Temperature, 101¼°; hyp. ac. ph., 100 gtt.

January 19th.—1 A.M.: Temperature, 100¾°; hyp. ac. ph., 100 gtt. 5 A.M.: Temperature, 100¼°; hyp. ac. ph., 100 gtt. 10 A.M.: Temperature, 100°; hyp. ac. ph., 100 gtt. Syrup and whiskey continued as before. Same dressing continued as before. 3 P.M.: Temperature, 99¼°; hyp. ac. ph., 100 gtt. 8 P.M.: Temperature, 100°; hyp. ac. ph., 100 gtt. 12 P.M.: Temperature, 98¾°; hyp. ac. ph., 100 gtt.

January 20th.—4 A.M.: Temperature, 99°; hyp. ac. ph., 100 gtt. 9 A.M.: Temperature, 98½°; hyp. ac. ph., 100 gtt. The blush and swelling have completely disappeared. Patient states that he feels perfectly well. Hypodermics discontinued. Ordered syr. ac. ph., ʒ ss. q. 4 hr.; also whiskey, ʒ ss. q. 4 hr.

January 24th.—Since last account temperature has been normal. No pain. Syr. discontinued. Ordered quiniæ sulph. gr. v. t. i. d.; whiskey, ʒ iii. q. 24 hr. Wound is granulating nicely.

January 30th.—Wound has completely healed. Fragment of nasal bones in position; good union. During treatment urine was tested for sulphates without result. Patient discharged cured.

The relation in these latter cases between the use of the acid and the fall of temperature is not as evident as it might be. Dr. Magnin believes that these cases were, nevertheless, of shorter duration than other cases of the same degree of severity, under

other plans of treatment, at the same time with the same surroundings.

I submit these cases for what they are worth, feeling that any plan of treatment which claims to help us out of the desperate straits in which septic accidents place us, is deserving of a hearing.

THE HISTORY OF A UNIQUE CASE ILLUSTRATING SOME VASO-MOTOR DISTURBANCES.

By BEDFORD BROWN, M.D.,
ALEXANDRIA, VA.

George C——, originally a vigorous, muscular man, about forty-five years of age, had for several years past been engaged in the occupation of a professional diver in the employment of the Government, and, at the time he became disabled, was on the coast of North Carolina.

While pursuing his vocation of diver, he was accustomed to wear a peculiarly constructed diving apparatus, with an enormous weight fitting to the back and pressing on the lumbar region firmly. Some two years since he detected over that region a slight prominence, extending about four inches in length, and probably two inches in breadth, and projecting out from the spinous processes of the lumbar vertebræ a half inch. The prominence was very firm and unyielding, and with but little tenderness on pressure, but occasionally the seat of sharp and severe pains. To all appearance it involved the cellular tissue and structures in the vicinity of the spinal column.

The enlargement increased gradually, and at certain periods, gave more pain, until he came under my professional charge. Notwithstanding the increasing inconvenience, he continued to pursue his calling until prostrated by a severe attack of malarial fever on the coast of Carolina, in September last.

He returned to his home in this city, while suffering from this attack. He then had fever of a remittent type, jaundice, constipation, delirium, paralysis of the bladder, excruciating pain over the affected lumbar region, extending down the left limb, scanty and alkaline urine.

At this time the prominence over the lumbar region projected at least an inch and a half above the level of the spinous processes. It was very hard, firmly attached to the surrounding structures, but not sensitive to pressure. It had all the indurated character of cartilage, but not the hardness of osseous material.

After the malarial symptoms had been completely subdued by treatment, there began to appear a remarkable series of morbid phenomena, chiefly of nervous character.

In this case there was not the remotest indication of spinal curvature, or disease of the osseous structures of the vertebræ.

Nervous phenomena.—For some two or three weeks after the subsidence of fever, the lumbar region continued to be the seat of excruciating pain.

Then the nerves of the left leg, the sciatic, crural, and all their principal branches extending down to the heel and toes, became affected with the most intensely agonizing form of neuralgia, but partaking rather of a paroxysmal character.

Associated with this neuralgia there existed well-marked anæsthesia of skin of the thigh and a portion of the left leg. When the hypodermic needle was introduced in these localities the patient was always oblivious of its entrance without his attention was called to it. Paroxysms of clonic contraction of the flexor muscles of the toes were now of frequent occurrence, often lasting for hours. These were entirely beyond the control of the patient, and were evidently not reflex in character, but central in origin. The diaphragmatic muscles also participated in this tendency to clonic spasm to a moderate extent.

This was manifested by a sense of constriction and tension in the region of the diaphragm, accompanied with neuralgic pains. At a later stage of the case, some three months after the patient came under my charge, the muscles of the left side of the face and eye also became subject to frequent involuntary contractile action, inducing twitching of the eyelid and facial muscles. This was soon followed by complete ptosis of the lid of the left eye, excessive dilatation of the pupil, and loss of vision of that eye. In the midst of all the other troubles, the mental faculties of the patient were not left entirely unimpaired. The memory not only became defective, but the power of reasoning by combination was in a measure seriously impaired.

The paralytic indications in this case were entirely confined to the bladder and eyelid. They were of a comparatively transient character. Both disappeared under treatment. The local anæsthesia was more permanent, lasting for many months.

Phenomena of local temperature in the affected limb —Local fever.—The temperature of the entire limb, excepting the sole of the foot, passed through two regular diurnal changes or rhythms, every morning and evening. These changes would occur regardless of the state of the general corporeal temperature.

For instance, the temperature of the left leg as evening approached would rise to 101° or 102°, while that of the body at large, and the corresponding leg, would stand at the normal rate. This fact was clearly appreciated both by patient and attendants. Thus as night approached the left limb would begin to manifest an increasing temperature. This would continue to increase until nine or ten o'clock P.M., at which period a genuine standard of fever heat would be reached, while the rest of the body would be normal. After this time there would be a gradual subsidence of heat until the normal rate was touched. These peculiar changes of temperature constituted a regular evening febrile exacerbation, confined strictly to a localized section of the body, and presenting a true type of local fever without inflammatory action. During these daily exacerbations of local fever, there was always a transient increase in the vascularity of the leg. The diseased leg would assume a more decided pinkish complexion than the sound; the action of the larger arteries would become more vigorous, and their pulsations stronger; the veins would become more turgid. All these local symptoms would subside to a partial degree with the periodical decline of temperature.

For many months the patient was subject to occasional and most unexpected paroxysms of general fever, usually, but not always, ushered in by a chill, without other premonitions, and terminating without perspiration. These attacks were always easily controlled by quinine.

Peculiar state of the vascular system and nutrition of the left limb.—While there was a daily increase in the vascularity of the limb during the local rise of temperature, and a partial reduction during the cor-

responding decline, there was manifestly a permanent dilatation of the arterioles of the leg.

The right leg and foot were always pale, and presented a perfectly normal state; the left foot and leg a more pinkish complexion, more fulness of the vessels, and a greater degree of warmth.

About the middle of last January, and after the patient had suffered fearful agony for many weeks, principally in the left heel, the skin over the plantar aspect of the part became livid. Soon the cuticle separated from the cutis and was much distended with a dark-colored serum. When the cuticle was entirely removed, the cutis being exposed presented a dark livid color, and was insensible to the touch. Within a few days a faint line of demarcation began to appear in a circular form around this discolored skin, corresponding to the surface of the heel.

The process of separation by sloughing progressed steadily and rapidly until the entire skin and cellular tissue of the plantar aspect of the left heel had become detached and thrown off, leaving a rather livid, unhealthy excavation behind.

Within three days copious granulations began to spring up over the entire excavation.

The cavity was soon filled with exuberant granulations, and within ten or twelve days their rapid growth had projected beyond the surface of the surrounding skin three-fourths of an inch, forming a well-defined, reddish fungus, which spread in all directions in regular umbrella shape. The growth at this stage appeared to have reached its full development, the process of proliferation came to a stand, and that of healing and gradual closing up of the sound skin took place. The fungus had entirely disappeared by absorption, the skin finally healing over perfectly, leaving a well-defined cicatrix. During this process the patient was certainly more than usually exempt from pain.

Throughout the early stages of this growth there was a constant and free discharge of a pure, odorless, transparent, gelatinous substance, amounting to such quantity as to saturate many cloths, and even the bedding, during the day. During the healing stage the discharge was simply purulent. Some three weeks after the subsidence of these peculiar symptoms, a somewhat similar change took place over the ball of the foot, without any indication of sloughing, as in the first instance. Granulations formed, but to a limited extent, and after a continuance of the gelatinous, followed by the purulent discharge, the diseased skin healed perfectly, leaving a rather livid cicatrix.

Notwithstanding the complete healing of these local affections, severe neuralgic pains with evening exacerbations continued in the localities of the cicatrices. A blister, when applied over the peculiar enlargement in the lumbar region, in the process of vesication, caused an effusion, not of serum, but of a gelatinous substance identical with the former examples.

Whether these peculiar exudative phenomena afforded an indication of a morbid condition of the blood, or of the state of that portion of the nervous system which presides over the circulation (the vaso-motor) is a question for consideration.

Certain morbid phenomena in this case, probably due to vaso-motor disease.—Recent experiments of Nussbaum, says Dr. Ringer, if correct, show that in certain animals the vaso-motor centres are not confined to the base of the brain, but that the spinal cord throughout its entire tract is also a centre for the origin of numerous filaments of this class of nerves for distribution to the vascular system. Flint, in his recent work on "Physiology," also says there is abundant evidence of the fact.

Hence there is every reason to believe that disease at the origin of the vaso-motor nerves within the brain or spinal cord is capable of, and does induce an infinite variety of local affections by causing abnormal states of temperature, circulation, nutrition, oxidation, by producing vascular contraction, or spasm, or extreme dilatation, thereby subjecting the particular locality to which the diseased nerves are distributed to sudden changes in temperature and the supply of blood, sometimes by producing vascular dilatation and an excessive supply of blood, thereby inducing increased or overnutrition with hypertrophic tendency; at other times, through vascular spasm cutting off the supply of blood or diminishing it, producing a defective state of nutrition and warmth, with a consequent tendency to atrophy or gangrene. Such I conceive to be the agencies which in this particular case have been in operation for the production of many, if not all of the peculiar local phenomena attending its progress.

We can very readily see how in this way vaso-motor disease may become the cause of those local changes in the vessels constituting active and passive engorgement, rapid cell and tissue proliferation, inflammation, inordinate and abnormal discharges, and gangrene. And we may also readily see how it may become responsible for many abnormal growths, and probably for many of those intractable affections of the skin, compound in their nature, and made up of engorgements of cutaneous vessels, inflammation, and adventitious deposition.

Treatment.—After a complete subjugation of the malarial symptoms, minute doses of oil of turpentine, tinct. of cantharides, and tinct. of nux vomica were used for the paralysis of the bladder, aided by the regular use of the catheter. The patient in a few weeks' time recovered from this. For the intense pain in the back, leg, and foot, every form of opiate, internally and hypodermically, was resorted to, but, of course, with only transient relief. The most permanent in its effects of all these remedies was the compound preparation known as chlorodyne. This agreed well with his digestive powers and general condition. For the absorption and reduction of the lumbar enlargement, blistering, large doses of iodide of potassium, and the steady use of quinine were found the most useful.

I was inclined at first to attribute this enlargement in part to periostitis involving the surrounding structures of syphilitic origin. But the patient, who was a man of moral habits, assured me that he was free of all taint. There was no evidence whatever, either secondary or tertiary, of constitutional syphilis.

At the present time, some six or seven months having elapsed since his recovery from malarial fever, the patient has greatly improved. The lumbar enlargement has almost entirely disappeared. He has recovered vision in the affected eye, and from ptosis of the lid. He has greatly increased in flesh, strength, and appetite.

He can, with the aid of a crutch, walk many squares. But he still suffers from his evening pain in the heel and foot, but in a modified degree, and slight evening rise of temperature in the extremity preceding the pain. I neglected to mention that electricity and minute doses of strychnia had been used, but only to increase the pain.

ON THE REMEDIAL VIRTUES OF TONGA.

By DAVID L. WALLACE, M.D.,

NEWARK, N. J.

This drug, which for years has been used by the natives of the Fiji Islands under the name of "Neuralgia Medicine," was brought to the notice of the profession in March, 1880, by Drs. Ringer and Murrell in a paper published in the London *Lancet*, the remedy having been handed to them by a gentleman named Mr. Ryer, residing in Fiji, with the wish that they should test its virtues.

As used in Fiji, it consists of a loose bundle containing leaves, bark, and woody fibre, the covering consisting of the inner bark of the cocoanut tree. This bundle is steeped in water for twenty minutes, after which the liquid is pressed out, and of this from an ounce to an ounce and a half is taken three times a day before eating. By drying the bundle and hanging it up in a dry place to prevent its getting mouldy, it will answer for a year.

The medicinal virtues appear to reside in the bark and fibre, the leaves apparently being added to deceive persons as regards these virtues.

We have three preparations of the drug—an infusion, watery extract, and alcoholic extract, the last appearing to be the most reliable.

Its action appears to be confined to the nerves of sensation, it having been used with very good effect in controlling pain in diseases of the brain and kidneys. It has also been used topically in certain diseases of the eye, Dr. Bader, ophthalmic surgeon to Guy's Hospital, speaking very highly of it in asthenopia, rheumatic iritis, and diminished tension of the eyeball. Its most brilliant results, however, have been seen in neuralgia, especially that variety attacking the cranial nerves, Dr. Ringer's and many other published cases recording this fact. I have within the past five months used it in quite a number of cases of cephalalgia, and in most of them with uniform good results. In a few istances I have met with failures, but what drug is there that will not disappoint at times?

Of two cases of trifacial neuralgia in which I prescribed it I wish to give a brief synopsis.

Case I.—Miss A. M. L——, aged forty. General health fair. For the past five years, about once a month has had an attack of the supra-orbital variety of both sides, lasting about two days, the pain being intense, and which nothing seemed to control. I saw her for the first time about six weeks ago. The paroxysm at that time was very severe, accompanied with marked intolerance of light and redness of the eye, with an abundant secretion of tears. I prescribed half-drachm doses of the fld. ext. of tonga every two hours. I called again in eight hours and found the pain had disappeared, all that remained being a sense of soreness quite common after these attacks. The relief came, she said, about twenty minutes after the first dose, and three doses accomplished the result as above. Another attack came on about a week ago, and the medicine was prescribed as before, and with the same results. Here we have a patient who, though she may not be cured in the proper acceptation of the term, has a remedy to control the attacks which heretofore have lasted so long and been so exceedingly painful.

Case II.—Mr. E. R——, aged thirty-five; occupation, dry goods salesman. Has been a sufferer from neuralgia of the infra-maxillary nerve for about four years. Came under my notice about six months ago. His attacks were very severe, and lasted invariably from a day and a half to two days. At that time I prescribed internally morphia in quarter-grain doses every three hours, and externally an ointment as follows:

℞.	Veratria	gr. iv.
	Morphia	gr. vi.
	W. aconit rad.	ʒ iss.
	Vaseline	ʒ i.

To be applied to painful part every fifteen minutes. As long as the opiate was continued and the ointment applied he had partial relief, but as soon as their effects began to wear away the pain returned. His attacks lasted two days, during which time it was necessary to keep up the medicines. He sent for me about three weeks ago for the same trouble, at which time I prescribed half-drachm doses of the fld. ext. of tonga every hour. The result was exceedingly satisfactory, the pain being controlled by the first dose and disappearing entirely after the fourth.

My experience with tonga has been remarkably good, and I think this drug, so highly useful in cases of neuralgia, and one which can be given without producing toxic effects—a claim that cannot be advanced for other medicines heretofore used in this complaint—deserves a place among our successful new remedies.

A UNIQUE CASE OF FOREIGN BODIES IN THE GASTRO-INTESTINAL CANAL—EVACUATION PER ANUM.

By SAMUEL KOHN,

NEW YORK.

To collect the reported cases of foreign bodies which have traversed the gastro-intestinal canal, and have been evacuated per anum, would require the ransacking of the files of nearly every medical journal for the last third of a century, since no bibliography of this subject has, to my knowledge, yet appeared.

A perusal of those journals which are accessible convinced the writer that the case about to be reported is an *unicum*. The history, briefly, is as follows: Mrs. J. G——, suffering from melancholia, with intercurrent attacks of mania, was, at the request of her parents, removed from the asylum to her home in this city. Symptoms which had manifested themselves during the last days of her stay in the asylum, now appeared in a graver form. Green-paint vomit, constipation, small, rapid pulse—120 per minute—a temperature of 102½° F., a pale, anxious countenance, were the general symptoms. Locally: Generalized abdominal pain, with special sensitiveness in the right iliac region; meteorism moderate; tongue thickly coated. The patient was very reticent, only saying and reiterating that she was "rotten inside," and could not possibly live. The diagnosis of peritonitis, localized in the right iliac region, appeared the proper one. After three days the constipation gave place to a mild form of diarrhœa, and all the urgent symptoms disappeared. Temperature and pulse fell, not to the normal, however. Vomiting was the only persistent symptom, but not as severe as at the outset; it invariably occurred after partaking of solid food; the patient was therefore supplied only with liquid or semi-solid nourishment.

This lull, after lasting for five days, was inter-

rupted by a second attack of peritonitis (?), presenting the same symptoms and lasting the same length of time as the first one above recorded, to be in turn followed by slight diarrhœa and relief from the distressing symptoms. For five weeks this alternate train of symptoms was observed by the writer; partial intestinal obstruction occurring four times. The treatment consisted in rest—though this was at times difficult, owing to the unmanageableness of the patient—the administration of opiates, etc.

Somewhat after five weeks the mother of the patient came to the writer's office, and said that, in obedience to instructions, she had regularly examined the evacuations, and that she had that morning found in the vessel a long, hard, spindle-shaped mass of fæces, encased in glairy mucus. Examination revealed the edges of several spoons protruding from the mass. Softening and breaking it up, she found it to contain three teaspoons, which she immediately brought to the writer's office. They certainly bore every evidence of their prolonged sojourn in the tortuous canal of the intestine.

On cleansing them with water it was seen that the three spoons must have traversed the canal lying in apposition with each other—the convexities of the one fitting into the concavities of the other, for the reason that the portions exposed to the action of the intestinal fluids and gases were blackened by them, while the protected parts retained the grayish-white color of britannia metal.

After the evacuation of the *materies peccans*, all symptoms of abdominal trouble disappeared, and none have since then returned. Measurements of spoons: Length, 5¼ inches; breadth of bowl, 1¼ inches.

The patient now declares that she swallowed the three spoons in one day, with the intention of thus ending her existence. Had one of them become wedged crosswise in any portion of the intestine, as has occurred in one of the reported cases, her plan would have been crowned with success.

Sexual Perversion.—The disgusting, but from an anthropological, ethnological, and medico-legal point of view important topic of sexual perversion is once more extensively discussed by Krafft-Ebing, to whom we owe the greater part of our scientific knowledge of this subject. It was Casper who first recognized the fact that the inclination of women for women (Lesbian love) and men for men, a perversion afflicting the human race from antiquity, may be of a diseased nature. Westphal questions whether it is always pathological; and Krafft-Ebing believes that this doubt must be carefully weighed. In summing up the observations thus far collected, seventeen in all, the latter author finds that hereditary taint was present in the shape of insanity in the ancestry in thirteen, and in all the cases except one, and in this one case temporarily so, the patients were neurotic and presented positive insane manifestations. Inasmuch as the patients do not as a rule indulge in pæderasty, but abhor it as much as normal and healthy persons, Krafft-Ebing suggests that the enactments against unnatural intercourse specify and should be limited to pæderasty, abuse of persons under fourteen years of age, and of animals. Thus the sufferers from sexual perversion would be able to follow their tendencies to any extent not involving an injury to the rights of others or public scandal.—*Journal of Neurology and Psychiatry.*

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

Service of D. HAYES AGNEW, M.D.,

Professor of Surgery.

(Reported by Guy Hinsdale, M.D.)

CHRONIC CYSTITIS.

This patient, for the last ten years, has been suffering from some bladder trouble. He complains now of an increasing frequency in passing urine, and states that in rainy and damp weather this affection is worse, and that he is now called upon to pass his water from eighteen to twenty times in the twenty-four hours. The urine is cloudy, but does not contain blood; it is loaded with mucus and pus, and, on standing, deposits a ropy, gelatinous mass. There is also a prolapse of the rectum induced by straining. The patient suffers from piles and a fissure of the rectum, and this point of irritation, being next to the bladder, excites it to frequent efforts to empty itself. Patients may desire to pass their water very often during the day, but are, perhaps, able to sleep all night without rising.

In the case before us there is not much pain unless he attempts to resist the flow of urine. When he does experience pain, it is situated deep in the perineum and about the neck of the bladder, not at all at the end of the penis. The seat of pain in this class of cases always helps us in recognizing the character of the disease. In inflammation of the prostate gland, the pain is chiefly restricted to the perineum and anus, and is accompanied by a sense of weight and fulness. As disease of the prostate progresses, the pain becomes more acute and radiates from the perineum to the back, the anus, the testicles, along the spermatic cords and down the thighs—wherever, in fact, there are nervous cords communicating with the hypogastric plexus. In cases of stone in the bladder the patient complains of pain felt near the external urinary meatus. Again, in cases of stone the pain is experienced *after* urination. Whereas, in disease of the prostate it exists during the whole act. In cystitis the pain is experienced *before* the bladder is emptied. In prostatitis the pain is aggravated during defecation, but in cystitis it is not necessarily so. Again, in prostatitis, an examination through the rectum reveals marked swelling and tenderness of the prostate, the stream of urine is diminished in size and retention may even occur. In cystitis, however, these conditions are absent. Another question which it is well worth while to ask, is whether, in beginning to urinate, he can start the water quickly, and whether he is not compelled to wait for a certain time before discharging the last few drops. Should you find that this is the case, you may reasonably suspect that you are dealing with a stricture.

Prostatic enlargement is essentially a disease of advanced life; it is rarely seen in subjects under fifty years of age. The muscular fibres and the connective tissue of the prostate body are prone, at this period of life, to undergo excessive nutrition altogether independent of inflammatory changes.

When men of advanced age come to you with the complaint that they are compelled to urinate more frequently, and that increased efforts are necessary

to eject the water, always make an examination through the rectum. We often meet with cases in which this process has been going on for a long time. The encroachment upon the urethra, being associated with impairment of the muscles which are so efficient in promptly emptying the bladder and clearing the urethra, causes the retention of a certain amount of urine. This accumulates until the organ becomes increased in size and, as the distention progresses, the urine begins to dribble away. Such is the true state of affairs in what is so often called "atony of the bladder," a condition the character of which is occasionally unrecognized from the failure of the practitioner to reconcile a constant flow of urine with the idea of retention.

I may say here that nothing is so false as to suppose that every old man has disease of the prostate; even those advanced in life and suffering from bladder trouble are very often free from such enlargement.

I now introduce the sound into this man's urethra and I find no obstruction in its track. There is no stricture. I explore the bladder and I think that we may also eliminate the subject of stone. I will now guard my finger with a little soap and examine through the rectum. I feel the prostate body distinctly and can say that it is not enlarged. The sphincter muscle is totally relaxed. There is, therefore, no stricture, no stone, no enlargement of the prostate. Thus we have narrowed the case down to either one of a growth in the bladder or an ordinary cystitis. Bearing in mind, now that the sound revealed nothing unusual within the cavity of the bladder and that the urine contains no blood, but, on the other hand, is loaded with mucus and pus, we can have no hesitation in saying that it is a case of chronic cystitis.

This disease is one of the most hopeless of all affections. It is more common in men than in women, and may be traced invariably to some pre-existing disorder of the urinary passages. A large number of these chronic cases are beyond the reach of any remedial measures you may adopt.

Acute cystitis is not a very common affection. It may be traumatic in its origin, or may be developed from an extension of inflammation from neighboring parts. I have asked the patient the question whether he ever had an attack of gonorrhœa, but he says that he has not. In acute cases of cystitis from this cause the disease is confined chiefly to the neck of the bladder. The imprudent use of certain drugs, such as cantharides and oil of turpentine, may cause an irritation and congestion of the same region.

Chronic cystitis scarcely ever gets well. For its treatment a great variety of measures have been recommended, proving, by their very number, the difficulties of its cure. In undertaking the care of such a case, endeavor to ascertain, if possible, its cause. If occasioned by stricture, your attention should be directed to its removal; if it arise from stone in the bladder, no progress will be made until that is removed. Local bleeding, which is of great value in acute cystitis, is rarely called for in chronic cases unless an acute condition has been superimposed upon the chronic, when the application of leeches to the perineum will be followed by relief.

The urine should be maintained, as nearly as possible, in a neutral state, and should be closely watched. If you find it acid, you will correct it with alkalies, such as the bicarbonate of soda or liquor potassæ, but when the reaction is alkaline, you will have recourse to nitric or nitro-muriatic acid. When urine is retained and, as a result, its chemical constitution becomes altered, a soft catheter should be employed once or twice a day, if its introduction do not increase the irritability of the bladder. An opium suppository introduced at bedtime into the bowel, may be demanded if the patient be harassed at night. It is important that the patient should endeavor not to obey every call that he has to pass water. He will soon be able to resist, and, instead of using the chamber every half or three-quarters of an hour, he will be able, after a while, to hold his water two or three hours at a time.

Of medicines by the mouth you will find that tar and tar-water, copaiba, turpentine, uva ursi, pareira brava, and benzoic acid are among the most important. Whichever you select, advise your patient to drink plain water freely. If the remedy you choose should fail to afford relief, change it for another, until the one best suited to the case is found. In many cases I have used this formula with great benefit:

℞. Decoct. uvæ ursi..... fl. ʒ viij.
Liquor potassæ..... gtt. cxxx.
Succi belladonnæ..... gtt. xlviij.
M. Sig.—Tablespoonful every four or five hours.

Another drug which I like, and which we will use in this case, is a decoction of triticum repens. You may make it by placing two ounces in a quart of water and boiling to a pint.

The patient should be directed to take the whole pint during the day. This remedy has been long known to have a decided influence in bladder troubles.

Injections into the bladder, either plain or medicated, by washings or by irrigation, are, in my belief, of very doubtful propriety. I am convinced of their bad effects and have for some time abandoned their use.

Opening the neck of the bladder, cystotomy has also been practised for the cure of this disease, the plan being to drain the urine from the bladder as soon as it enters, and, in this way, to remove one of the principal causes of the perpetuation of the trouble. The operation is not an established method of treatment, and its statistics, as they stand at present, are not very flattering.

The diet of your patients must be carefully regulated. So, also, their exercise and habits of life. Stimulating or highly seasoned food, wines and liquors of all kinds, must be avoided. Old cider, however, if perfectly sound and not too acid, may sometimes be drunk with advantage. Innumerable mineral waters have been highly extolled as possessing remarkable powers over these affections, but they have little superiority over good, pure, plain water. The Rockbridge alum and the Vichy waters, however, deserve their good reputation as palliative diluents. Warm clothing, thick shoes, a free action of the skin, and the avoidance of excesses of all kinds, must be enjoined.

If your patient, after all, should fail to improve, and nothing in the whole range of remedies that I have mentioned seems to be of benefit, do not be disheartened at your want of success. These cases, even in the most skilful hands, often prove the most obstinate we have to deal with. And here I want to say one word about the early use of opium —the less you have to do with it, the better. You should always look upon it as the *dernier ressort*.

HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, LONDON.

UNDER THE CARE OF PROSSER JAMES, M.D.

CASES OF SYPHILITIC DISEASE OF THE THROAT.

SOME very interesting cases of syphilitic lesions recently presented themselves at the clinic.

CASE I.—This patient applied, on May 17, 1882, for difficulty of breathing and swallowing. The patient, on a casual glance, appeared to be suffering from acute tonsillitis. On oral examination this diagnosis appeared at first to be confirmed. Both tonsils were enormously enlarged, so much so as to meet in the median line and crush the uvula between them. They were covered with a mucopurulent secretion exhaling a most offensive odor. On looking around the oral cavity Dr. James found what was apparently a mucous patch, and on questioning the patient he acknowledged to contracting primary syphilis three months previously. He was ordered small doses of gray powder. As deglutition was difficult, he was told to place the powders on his tongue, and then swallow them by drinking a small quantity of water slowly. On the 24th inst. he again attended, and stated that he was much better. His countenance had assumed a healthy appearance and his voice was natural. On inspection the tonsils had diminished in size to about half, so that the posterior wall of the pharynx and posterior pillars could now be seen, on which one or two mucous patches appeared. The patches observed on the anterior pillars and on the tonsils the previous week were entirely gone. He was ordered to continue the powders and warned of the danger of neglecting to continue the treatment.

CASE II.—Jonathan B——, aged twenty-four, had been an in-patient, in 1873, for laryngeal affection, which was supposed to depend on hereditary syphilis, and which he had been then (1873) suffering from for a period of five years. The symptoms in 1873 were so urgent that tracheotomy was performed, and he has worn the tube ever since. On one occasion the tube came out, and he was unable to replace it himself. He suffered from great dyspnœa, and "thought he should have died," but was brought to the hospital, where the tube was replaced. The object for which he now attended (May 17, 1882) was to get a fresh tube adapted. On oral examination a large perforation of the soft palate was at once seen, forming a free communication between the cavities of the mouth and nose. Behind this a large false membrane extended right across the fauces, completely barring the entrance to the pharynx. No opening whatever could be discovered for some time by probing in all directions with a soft œsophageal bougie, and it really seemed as if all the food must pass into the nose through the aperture in the soft palate and thence downward behind the false membrane into the œsophagus, but no bougie could be passed in this direction. On laryngoscopic examination, however, Dr. Prosser James discovered a small aperture at the base of the tongue, and demonstrated to the visitors present that a small-sized bougie could be passed through it and from thence into the stomach. On questioning the patient as to whether deglutition was not a very tedious process, he said he could not well manage to eat his dinner in less than fifteen minutes, and minced his meat—a very favorable state of things considering the narrowing that had taken place, and for the relief of which some operative procedure was plainly indicated. No trace whatever of the larynx was discernible, the view from above being entirely closed by the membrane above described. Freedom from respiratory trouble was only to be accounted for by the fact that the patient had always worn his tube.

By passing a larger bougie, Dr. James dilated the opening in the membrane somewhat, with the result that the following week (May 24th) the patient reported that he had been able to swallow better. Dr. James remarked that probably a considerable degree of dilatation could be effected by perseverance in this line of treatment, but that it was not likely to be permanent, that recontraction would probably occur on discontinuing the use of bougies. This method was therefore likely to be tedious and unsatisfactory, and it became a question whether more active operative measures might not only succeed in removing the obstruction but reveal the condition of the larynx and by bringing that organ within the range of treatment eventually enable the man to dispense with the tracheotomy tube. The galvano-cautery might be employed for the purpose, but he was rather inclined to a preliminary incision or splitting of the closing membrane by a specially shaped knife with a view of continuing operative procedures according to the condition revealed. He thought it quite possible to excise a sufficient amount of the abnormal growth to restore the normal functions of the parts, but would first place the patient on a course of specific treatment as a preparative.

CASE III.—James C——, aged forty-one, attended on May 31, 1882, for difficulty of breathing and speaking. On inspection it was seen that the whole of the soft palate and uvula had disappeared. He stated that his throat had been affected for nine years, and, on further questioning, a history of primary syphilis, twenty years ago, was elicited. Rhinoscopic examination was very easy, owing to the absence of the velum. The meatuses and the turbinated bones seemed healthy, but here and there particles of food were seen adhering to the membrane. The middle third of the septum on both sides was enormously swollen, giving the appearance at first sight of a pair of polypi. Laryngoscopic examination was rather difficult as the epiglottis was pendant, and the patient suffering from much dyspnœa Dr. James, however, demonstrated that both larynx and trachea were diseased. The vocal cords were both red and swollen—in fact, appeared as fleshy masses. The false cords were greatly thickened as also was the posterior wall of the larynx. The arytenoids were considerably enlarged. Below the vocal cords a thickish rough-looking proliferating mass was seen, somewhat resembling papillomatous growths and apparently arising from the anterior wall of the trachea. It was covered with offensive secretion, on the removal of which, by coughing, some ulceration was visible. The abnormal growth considerably diminished the calibre of the trachea, and to the stenosis thus produced was obviously due much of the dyspnœa. On auscultation, considerable emphysema of both lungs was found. Inspiration was specially difficult, each effort drawing in the thoracic walls and the larynx moving spasmodically. The dyspnœa had got rapidly worse during the last three months. Dr. James considered that the patient's future depended chiefly on the tracheal stenosis. It was, of course, impossible to see how far down this extended, the view of the lower part of the passage being occluded by the growth in the upper. This

might possibly lessen under treatment and further exploration by laryngeal probes become possible. If the trachea could be opened below the growth, he would recommend the operation being done, notwithstanding the emphysema—that is, if no reduction of the growth were brought about by treatment, and, in any case, he would deem it proper to risk the operation rather than let the patient die asphyxiated. Delay, however, was indicated by the ulceration, which process was likely to extend down the trachea and might be arrested by treatment. The patient was ordered to take an iodide of potassium mixture three times a day and three grains of gray powder thrice daily also.

Case IV.—Julia F——, aged forty-five, has been attending since August 17, 1881. She attended then for tertiary syphilis affecting the fauces. There was then ulceration of both anterior pillars, the entire uvula and velum, and the posterior pillars. There was a perforation of the palate which had lasted twenty years. The patient was ordered iodoform pills and iodoform insufflations. The next week this was changed for an iodide mixture to be taken every three hours, and a sulpho-carbolate gargle to be used frequently. By September 14th the ulceration had completely healed, and the mucous membrane presented a healthy appearance. The patient was then put upon mercurial treatment and advised not to leave off attending. More recently she stated that she had suffered from epileptiform fits, on which account bromide of potassium was ordered.

Progress of Medical Science.

Diagnosis of Pott's Disease before the Stage of Deformity.—In a paper read by title before the New York State Medical Society (reprint from *Boston Medical and Surgical Journal*, 1882), Dr. Gibney enumerates some pathognomonic points that should be considered in the early diagnosis of spinal caries. In his experience, tenderness on pressure with the hand, or with the hot sponge, are usually found absent in the early stages of the disease, and, indeed, pressure should relieve rather than cause pain. Nor can the presence of yielding or soft spots be relied upon in forming an opinion as to the nature of the lesion, because they may be found in ordinary rickets. The common test of *forcible pressure*, or a blow on the head or shoulders in the long axis of the body, he holds to be dangerous, especially where the dorsal or cervical regions are diseased. In the general examination of a suspected case, attention should first be devoted to the duration of the symptoms, then the conduct of the patient during waking hours, and especially to the use he makes of his spine. Inquiry will usually elicit that a slight strain or jar has been followed by a cry of pain, the sufferer seeking relief in some special position that he finds by experience is effectual. The disturbed sleep of spinal caries is characterized by restless moanings and faint cries on turning, while in hip-joint disease there are sharp cries without waking. In examining the patient he should be stripped, and after the spine has been tested as to its mobility, the functions of the hip-joints should be investigated, and the pelvis explored, as well as the ilio-costal spaces, both by palpation and percussion. When the disease is located in the cervical and cervico-dorsal regions, among the earliest symptoms are found slight torticollis or modified opisthotonus, while the step is apt to be short and cautious; there will also be a compensating backward curve in the dorso-lumbar region and the head sinks down between the shoulders. The irregularly acting diaphragm will also assist in locating the seat of the disease, as the fourth and fifth nerves are of necessity implicated. The pharynx should then be explored for tumors. When the first or second vertebra is the seat of the disease, occipital neuralgia will be present in almost every case.

When the disease is confined to the dorsal region, there will be an absence of the head symptoms, and the pain will be referred to parts on a level or below the vertebra affected. There will be a lordosis rather than a projection of the spine. When the lower dorsal region is affected, tumors may present in the ilio-costal space before any bony deformity manifests itself. When the lumbar region is the seat of the difficulty, the early symptoms will be confined to the limbs; there will be lameness or stiffness and the symptoms will last a long while; flexion of the thigh, which is at first slight, gradually becomes more pronounced. But attention should now be especially devoted to the hip-joint, which will be found normal in every respect. Presently a soft tumor appears in the groin or in Scarpa's space. Dr. Gibney holds that a *soft tumor* in this location, when preceded by a lameness that has persisted for some weeks, and in the absence of hip-joint disease, constitutional disturbance, injury, or intestinal difficulty, indicates disease of the last dorsal or first lumbar vertebra. Dr. G. also calls attention to a point brought out in a report to the Therapeutical Society by Dr. T. E. Satterthwaite (Medical Record, August 21, 1880), that Pott's disease is frequently associated with caries of other joints. He therefore urges that in all such suspected cases a thorough examination should be made of all the joints, lest an important complication be overlooked. Dr. Gibney bases his paper upon an examination of the records in one hundred and ninety-six examples of Pott's disease that came under his inspection during the year ending December 31, 1881.

Treatment of Contraction Following Hip-Joint Disease, by Means of the Weight and Pulley.—Extension has been used in many different ways to correct deformities, resulting from hip-disease, but never in exactly the manner practised by Dr. E. H. Bradford, who has described his experience in a paper before the Boston Society for Medical Improvement, January 9, 1882. In three cases, where the thigh was flexed at about a right angle with the axis of the sacrum, after the application of a ham-splint, traction was exerted by weight and pulley so that at the end of one week, in the first case reported, the leg was brought into a line with the axis of the body.

In the second, at the end of a fortnight, the extension was exerted in a line with the bed on which the patient lay, and some eight weeks later, with the ham-splint still in position, the patient was allowed to walk about the ward, and finally was discharged with his limbs nearly parallel. The third case was that of a child, three years old, delicate, but fairly nourished. At the end of three weeks the deformity was so far improved that no tilting of the pelvis occurred when the limb was placed on the bed. In this case advantage was taken of the direct weight of the leg, which is no small factor, as shown in a case of Dr. B.'s of nineteen years' standing, when

the deformity attained an angle of 70°, and the patient was compelled to wear a shoe raised five inches from the ground. In this case a ham-splint was so applied as to immobilize the knee-joint when the leg was extended. As soon as the patient became accustomed to the presence of the splint she was allowed to walk about at will.

In this way treatment could take effect only while the patient was standing. At the end of six months two inches was removed from the sole of the shoe, and the patient could rest the whole weight of her body upon the affected limb. In cases of short standing, when only a slight deformity exists, Dr. B. finds slight traction, without regard to the line of deformity, is effective in a very short time. The skin, in the groin, will at times be considerably stretched, causing nocturnal pain, but no serious complication has ever occurred under his supervision.—*Boston Medical and Surgical Journal*, January 19, 1882.

Failure and Success in the Treatment of Traumatic Tetanus.—Dr. Charles T. Beck, of New York, reports a fatal case of traumatic tetanus, in which the treatment by eserine was an important feature (*Medical News*, May 13, 1882). The patient, a well-developed boy of sixteen, was injured in the foot by a rusty nail. The wound attracted but slight attention for a week, but at the end of this period tetanic symptoms were established. Atropia and morphia were then administered hypodermically, one-thirtieth of a grain of the former with one-half grain of the latter, and were rapidly followed by chloral hydrate and bromide of potassa. After twenty grains of the former and half a drachm of the latter had been given, with inhalations of chloroform—all without success,—eserine was resorted to as suggested by Dr. Thomas Layton (*Medical News*, March 25th). At first one sixty fourth grain doses per hour were exhibited, the chloroform inhalations being continued, but without visible effect. The eserine was then advanced to one forty-eighth grain every hour, and the patient appeared to improve steadily under this dose until the following morning, when all the symptoms became more pronounced. Still hopeful of the eserine, it was pushed to one twenty-fourth grain every half hour, but there was no reduction in the force or frequency of the spasms, and the patient, continuing to fail, sank and died early in the morning of the tenth day. In the *Lancet* (April 8, 1882) Mr. Millar reports a successful case treated with syrup of chloral (B. P.). The patient, aged forty-three, was severely lacerated in his side and shoulder by the wheels of a threshing machine. The wounds were dressed with carbolic lotion (1 to 40), and the patient's progress toward convalescence was satisfactory until the eleventh day, when sore throat and difficult deglutition were noted. Three days later his neck was found red and tender to the touch. On the morning of the eighteenth day it became clear that tetanus had set in. A hypodermic of morphia (one sixteenth grain) relieved the severity but not the frequency of the contractions, but a drachm of the syrup of chloral administered *per orem* produced a decided amelioration in the severity of the attacks. The patient was then directed to take one drachm per hour while awake. After the third dose he slept for three hours and the paroxysms became less regular in their appearance and less severe. He was then ordered to take the chloral less frequently, but on the following morning being worse, the hourly doses were again prescribed; five days later he could sit up in bed. The dose of chloral was now increased to a drachm and a half, but to be taken only when specially indicated. The patient continued to improve until he was discharged cured, six weeks after the reception of the injury.

Omphalitis and its Complications.—Anna Lukens, M.D., Resident Physician to the Country Branch of the Nursery and Child's Hospital, Staten Island, treats of omphalitis of the new-born, in a paper published in the June number of the *New York Medical Journal and Obstetrical Review*. After giving an illustrative case, she remarks that the disease is of rare occurrence, but that it is said to occur even during fœtal life, by the movements of the child causing traction upon an unusually short cord, or one that is wound around the body of the fœtus. As described by Hennig, there are four varieties: 1. A mild form, in which the navel is prominent, the surrounding skin is reddened, the abdomen is distended, and, when the abdominal walls are thin, the vein can be felt as a cord extending from the liver to the umbilicus. 2. In the second or severe form, the navel is infiltrated and surrounded by a reddish-blue circle. Erysipelas frequently occurs, and extends over the abdomen and the lower extremities. There is greater distention of the abdomen, even when peritonitis does not occur, than in the mild form. The urine is sometimes bloody or icteric. The stools are greenish or bloody. Movements of the inflamed navel are painful, and may cause convulsions or trismus. Recovery is rare in the severe cases, but may occur after the disease has continued two or three weeks. 3. The third variety is the croupous or diphtheritic. The peritoneum behind it is usually involved in the inflammation, and frequently the contiguous coil of intestine. 4. The fourth variety consists of an inflammation of the tissues surrounding the umbilical vessels within the abdominal cavity, and often accompanies puerperal disease. It is usually limited to the vicinity of the navel, but may extend along the course of the umbilical vein to the capsule of Glisson. Early in the disease the umbilical vessels are not affected, but they subsequently participate in the inflammation, and necrosis may occur from compression by the shrinking exudation. The peritoneum is at first only locally injected; afterward a yellowish infiltration separates it from the posterior wall of the umbilical fossa. Omphalitis may occur primarily, or secondarily to other diseases. It is attributed sometimes to anomalies in the closure of the navel, to rough handling, to uncleanliness, to impure air, or to puerperal infection. Peritonitis and thrombosis of the umbilical vessels, with subsequent phlebitis and arteritis, are frequent complications. Umbilical hemorrhage, icterus, and pyæmia may also occur. Umbilical phlebitis may be produced by purulent matter entering the vessels from the fossa of the umbilicus, also by traction on the cord or tight bandages, or it may be secondary to omphalitis when non-involution of the umbilical vein exists. Thrombosis sometimes has an intra-uterine origin. Inflammation of the umbilicus, and especially of the outer walls of the umbilical vessels, is an important factor in causing non-involution. Besides other causes, thrombosis may also be due to defective nutrition of the vascular walls themselves, arising from a general septic poisoning, causing pyæmia or septicæmia. Whereas, on the one hand, thrombosis may occur from septic absorption, so, on the other,

there may be general septic poisoning after involution of the vessels, when no thrombosis can occur. The infection may be limited by thrombosis *in situ* of the umbilical vein, just as the uterine lymphatic glands may sometimes limit the diffusion of poison in puerperal infection. The principal danger in thrombosis of the umbilical vessels is the softening and breaking up of the coagulum, with the formation of distant emboli. As the umbilical vein is, of all the blood-vessels peculiar to fœtal life, the first to undergo involution, and is even at birth sometimes found considerably contracted, softened clots can rarely be admitted to the venous blood through the ductus venosus. Even an embolus in the liver is an exceptional occurrence. A coagulum at the entrance of the umbilical vein into the portal vein has been frequently observed, but is believed to be a local thrombosis and not an embolus. Thrombosis sometimes, though rarely, extends from the umbilical vein into branches of the portal vein. In regard to the pathological anatomy of umbilical phlebitis, the vein frequently presents a hard, cord-like feeling, the walls being thickened and often unevenly dilated. The contents may consist of simple disintegrated coagula or of uniform laudable pus. Sometimes the pus column is separated by cheesy masses. Occasionally a pseudo-membrane is found lining the vein. The intima and middle coat finally dissolve into a mass of white blood-corpuscles. The liver is sometimes, though rarely, affected. Bednar once found, in umbilical phlebitis, the hepatic vein inflamed, and nearly all its branches filled with pus, which, on section of the liver, flowed out in great quantities. Emboli in the hepatic branches of the portal vein have not been clearly demonstrated. When inflammation of the connective tissue around the umbilical vein extends to the capsule of Glisson, the latter becomes swollen and infiltrated. The inflammation may extend to the hepatic parenchyma, and by compression of the bile-ducts produce mechanical icterus, which assumes, however, the malignant form. The symptoms of phlebitis are a cyanotic or icteric hue of the surface. Pemphigus vessels and hemorrhagic abscesses are frequent. Gangrene, especially over the sacrum and of the navel, may occur. The purulent contents of the vein can sometimes be pressed out through the umbilical fossa. The umbilicus becomes prominent and indurated. The cord may have fallen or be still adherent. The inflamed vein can sometimes be felt through the abdominal wall. Next to peritonitis, meningitis is the most frequent complication. Peritonitis may be circumscribed or general. The peritoneal fold surrounding the umbilical vein is often the starting-point of the inflammation. Phlebitis is often only recognized after the appearance of purulent infection. It occurs between the first and twenty-eighth days, most frequently on the seventh. The fatal termination may be either from general septic poisoning, from peritonitis, from embolic infarction and metastatic abscesses, or from thrombosis in important vascular territories. Inflammation of the umbilical arteries may be confined to the seat of the coagulum, the remaining portion of the vessel being contracted or even closed. The coats of the vessels become swollen and gradually disintegrate, and finally perforation occurs. The adventitia is the seat of the principal changes, which readily extend to the surrounding tissue. Arteritis may occur after the umbilicus is almost or entirely healed, and the latter may afterward begin to protrude, inflame, and suppurate. Pus can sometimes be pressed out by making pressure upward from the bladder. At times there is retention of urine, with painful micturition, and sensitiveness in the region of the bladder. Icterus and peritonitis may occur, but belong more particularly to phlebitis. The contrast between arteritis and phlebitis is striking. Arteritis is rarely accompanied by fever, icterus, or pyæmia, and is almost always cured. Phlebitis has all the above-mentioned complications, and is almost always fatal. Arteritis is rarely a cause of general infection, but pyæmia may occur by purulent matter from the arteries being taken up from the umbilical fossa by the vein. This occurs more easily when the navel has been closed or healed over. Or infectious material could pass, in the opposite direction, into the pelvic blood-vessels, and from these into the general circulation. The neighboring lymph-vessels can also take up molecular detritis and carry it into the circulation. Thrombosis of the ductus Botalli has been observed in arteritis but oftener in phlebitis.

Intra-cranial Disease and Choked Disc.—Dr. Edward G. Loring contributes to the June number of the *New York Medical Journal and Obstetrical Review* an article on the nervous connection between intra-cranial disease and choked disc, the conclusions of which are: 1. That the vaso-motor theory, as advanced by Benedikt, is not sufficient to explain either the mode of transmission of the morbid irritation within the head, or the resulting neuritis optica. 2. That the irritation is conveyed, not by the isolated fibres of the sympathetic system, as stated by Benedikt, but through the agency of the trigeminus. 3. That choked disc or papillitis, in connection with brain disease, is the expression of an irritation or compression of certain intra-cranial fibres of the fifth pair, which preside over the blood-supply of the disc and neighboring parts, and also maintain the healthy processes of waste and repair of the tissues themselves. This being so, he adds, the same analogies and distinctions between "irritation" and "inflammation" can be made here as with sympathetic ophthalmia, so that here, as well as there, the irritation may exist as such for an indefinite time, or may so reduce the vitality and resisting power of the tissue of the disc and surrounding parts as to develop gradually, or explode suddenly, into an actual inflammation—that is, into a neuritis. The immediate and exciting cause of this neuritis may then be either an external one, such as exposure to cold or heat, over-exertion, either mental or physical, or, indeed, too much exposure to light, the effects of which, under the weakened condition of the organ, may be looked upon as a "traumatism"; or the exciting cause may be an internal one, such as some irritation from the condition of the blood and circulating fluids, either chemical or mechanical, either local or general, which, insufficient in itself to produce any bad effect upon a normal disc, may yet be just sufficient to produce a condition of inflammation in a part that is weakened and irritable.

A Very Rapid Heart.—Professor Pribram is reported in the *Wiener Mediz. Wochenschr.* as saying that he has had a case of "vagus neurosis" in which the pulse reached three hundred beats a minute! Professor Pribram must have employed Bunnell's lightning calculator in order to have counted it.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, July 22, 1882.

A STUDY OF WINTER HEALTH RESORTS.

In a study of the subject of winter health resorts, by Dr. Burney Yeo, recently published in the *Fortnightly Review*, some facts are collected which will be found valuable for the general practitioner.

Dr. Yeo first discusses the rationale of the so-called mountain cures. He considers it a mistake to suppose, as has been done, that elevation is the essential. It is shown that immunity from phthisis exists at very different levels in different parts of the world. Thus, in the Peruvian Andes, patients are sent to a height of 10,000 feet; in Mexico they ascend to valleys 6,500 to 7,000 feet above sea-level; in Colorado the elevation is between 5,000 and 6,000 feet. In the Pyrenees phthisis is rare at elevations varying between 2,000 and 4,500 feet. In some parts of Switzerland localities 3,000 feet high are as free from consumption as are others of twice that altitude. In the Black Forest and in Silesia an immunity exists at from 1,500 to 2,500 feet. We might cite our own Adirondacks as having, though at a low level, a good reputation as a health resort. The Russian physicians send their phthisical patients to the Steppes of Tartary, some of which are even below sea-level.

Elevation is, therefore, according to this author, only one of the factors in mountain cures. Purity of air is thought to be the chief curative agency, the air of mountain cures being generally quite free from all organic dust.

Stillness is another element. Most of the elevated health-stations are in valleys quite protected from the winds. This fact, in connection with the rarity of the air, has, however, an unfortunate tendency eventually to injure mountain health resorts. As soon as they get a reputation a population accumulates, houses are built, and the smoke being too heavy to ascend in the thin air, and there being little wind to blow it away, it hangs over the town in a cloud. This is the case at Davos, and, as we are informed, at places in Colorado. In addition, drainage is neglected, and the dangers of cesspools added.

There is one peculiarity of high altitudes, which no doubt is of therapeutic importance. This is the intense heat of the direct rays of the sun. At Davos, on January 31st, the mercurial thermometer, with blackened bulb, in the sun recorded 158° F. In the shade the record was only 41.5° F. At Greenwich, England, the thermometer in the sun on the same day reached only about 71.5° F. The curious fact exists that patients go out to walk in the snow, taking umbrellas to protect themselves from the sun. This intense heat of the sun's rays enables the invalid to remain out of doors on very cold days. The dryness of the air further helps to make the cold endurable.

The equability of temperature, especially as regards diurnal temperature, does not, of course, exist at high altitudes. Dr. Yeo is inclined to place less value upon this factor than is usually done. In the very equable climate of Ceylon consumption is quite prevalent. The fact is that changes of temperature have a very different therapeutic effect, according as they occur quietly and diurnally, or more slowly and with blustering storms and rain; also according to the especial local peculiarities of the climate.

The rarity of the air is the thing which, next to its purity, makes mountain resorts distinctive in their effects. This causes a rapid respiration, and forces into action every part of the lungs; and functioning tissue does not degenerate.

Dr. Yeo finally gives a summary of the classes of cases which are suitable to high mountain health resorts. This summary, which is quoted by him, is not a new one, but it condenses fairly medical experience up to the present time, and may be profitably inserted here:

First.—Where there is an obvious and well-ascertained predisposition to consumption, and when perhaps a slight hemorrhage has occurred without the manifestation of any definite local disease; as a *preventive* measure a residence for two or three seasons in a high mountain station is to be recommended.

Second.—In catarrhal forms of consumption, in the early stage, without much constitutional disturbance, the best results may be looked for. But cases with much fever from the commencement, and of nervous and excitable temperament, must not be sent to high altitudes.

Third.—Chronic inflammatory indurations and infiltration of limited portions of the lung, often the result of acute congestions and inflammations, are especially suitable; not so, however, if a considerable extent of lung is the seat of tuberculous disease, or if, owing to the extent of lung involved, and consequent changes in the sound lung, there is much difficulty of breathing.

Fourth.—Cases of chronic bronchial catarrh in

young people; that is to say, those cases of tendency to repeated attacks of "cold on the chest," often left behind in children after whooping-cough, measles, and other maladies.

But this does *not* apply to the chronic winter coughs of persons more or less advanced in life; or to cases where there is much *permanent* shortness of breath.

Fifth.—The results, in the shape of thickenings and adhesions, of former attacks of pleurisy, to which too often the development of serious subsequent lung disease can be traced. The pulmonary gymnastics excited by treatment in high altitudes prove of great value in these cases.

Sixth.—Many cases of purely nervous asthma have been cured in these resorts.

Seventh.—Apart from cases of pulmonary disease, many other ailments, such as general loss of power, not dependent upon organic disease—cases of nervous exhaustion, overwork, retarded convalescence, in otherwise vigorous constitutions, certain forms of dyspepsia and hypochondriasis, and other less strictly definable maladies—not seldom find restoration to health and strength from prolonged residence in the pure bracing air of these Alpine stations.

FURTHER CONTRIBUTIONS TO THE ETIOLOGY OF TUBERCULOSIS.

LANLANIE makes some observations (*Comptes Rendus*) regarding the origin of tuberculosis in a dog. He found in the lungs of this animal appearances closely resembling true miliary tuberculosis. The tubercles were due, however, to the presence of the eggs of a parasitic worm (*strongylus vasorum*). This parasite in its adult state, we are told, gets into the right ventricle and pulmonary artery, where it fastens itself to the walls. It here lays its eggs, which are carried by the blood-stream to the lungs, where they lodge and develop by irritation an apparent tuberculosis. The microscopical appearances of these tubercles closely resemble those from other causes, and confirm the view that the miliary tubercle has no anatomical specificity.

Dr. P. Ehrlich announces a new method of showing the bacillus of tuberculosis. It is a great improvement upon Koch's, because, as he tells us, one can see larger bacilli and more of them! The author rather thinks also that these bacilli have a capsule. Dr. Ehrlich is accustomed to use phthisical sputa in order to demonstrate the organisms. Portions of this are teased out, pressed between glasses and dried.

His staining fluids consist of a watery solution of pure aniline, to which is added a little saturated alcoholic solution of methyl violet until opalescence appears. The sections are allowed to stay in the staining fluid from fifteen to thirty minutes. They are then removed and blanched by a few seconds' immersion in nitric acid and water (1 to 2). This acid takes the color away from all but the bacilli. Dr. Ehrlich thinks that mineral acids harden the capsule of the bacillus and make it opaque. On the other hand, the alkalies soften it and allow staining fluids to enter. The inference is drawn that the disinfectant of the future for phthisis will probably have to be of an alkaline reaction.

We submit Dr. Ehrlich's account of his discoveries without comment, since it is too early to make positive statements regarding it. Doubtless our readers will follow his descriptions and reasonings with the intellectual interest, at least, that attaches to all things transcendental.

OUR HOSPITALS.

THE "Medical Register" for the present year gives a very complete and a very long list of the hospitals in this city and in the State. It is well known that New York has a great many charitable institutions. We doubt, however, if our citizens or even our medical men realize how large this number is, and in what disproportionate amount New York City expends money upon her sick.

There are nearly forty different public and private hospitals in the city, having a capacity of over 7,000 beds. Fourteen of these are entirely or in large part supported by the public, and they hold about 5,000 patients. Considerably more than one-half of the sick, therefore, are cared for at the city's expense.

The majority of the twenty-five private hospitals are for treating special classes of cases. This large number of special hospitals is now a feature peculiar to New York. There is no other city in the country which has so many. Not a few of them, also, are costly structures and finely equipped. The eye, ear, and throat hospitals are most numerously represented, though, in capacity for treatment, the hospitals for women and for children take the lead. Most of the large public hospitals have wards devoted to one or other special class of diseases.

It is when we compare the hospital accommodations of this city with those of the rest of the State, that one realizes their great extent. Brooklyn, with a population one-half as great as that of New York, has but eight hospitals, with a total capacity of about one thousand.

In the whole State, outside of New York and Brooklyn, there are, according to the "Register," but thirteen hospitals, having a capacity of less than two thousand.

New York has, therefore, not quite twice as many hospitals, but more than twice as many hospital-patients as all the rest of the State.

These facts will suggest to the physician the immense clinical opportunities of our city. But they will naturally awaken the tax-payer to thoughtfulness also. Our hospital population is made up, to no small extent, of the waifs of humanity attracted to the city, but unable to succeed in the fierce struggle for existence.

CREMATION.

The attention of the world has been drawn to cremation again by the news that Garibaldi wished his remains disposed of in this way. In a very timely manner it is announced that the United States Cremation Company has been licensed, under the general business act of 1875, to carry out the will of those desiring mortuary pyrotechnics.

The subject of cremation has now been before the modern public for a number of years. The novelty has worn away. People for the most part are no longer shocked at the idea, and they have lost some of the morbid interest in the details. Cremation can now stand upon its own merits. We believe that if careful provision against any medico-legal trouble be made there can be no objection to the process for those who have a taste for it. That it is necessary on sanitary grounds is not yet proven. Some cemeteries are unhealthy, but not all, and the real dangers from burial-places have no doubt been exaggerated.

On the whole, cremation, though it has appealed to the popular imagination, has not in the least obtained popular favor.

It cannot become a universally prevalent method of disposing of the dead. It will, perhaps, in time be adopted in closely populated districts when sanitary necessity supplements the other arguments in its favor.

THE BOYLSTON PRIZE AND MEDICAL WOMEN.

The Boylston prize has been awarded to an Englishman again, and our brethren of Boston are mourning the dulness and inactivity of the American physician. The prize was awarded to Mr. T. M. Dolan, F.R.C.S., of Halifax, England, for an essay on "Sewer Gas, its Physiological and Pathological Effects on Animals and Plants." This is the third time that the prize has gone out of this country, and the conclusion is becoming inevitable that there is no American, even in Boston, smart enough to get it.

We dislike to give advice, but perhaps in this emergency it will be pardoned. We would suggest to our Massachusetts friends that, since the men have failed so entirely, they give a little more encouragement to the women. It was a woman who gained one of the few European prizes ever taken by American physicians. When one is *in extremis* the help of the gentler sex is ever sought for, if it is only to lay out the corpse. Therefore we think of her now. But in the present trouble Massachusetts can expect nothing of her medical women so long as she maintains a, so to speak, sedentary posture upon them. The Massachusetts medical woman is in the anomalous position of having to join the homœopaths in order to get a standing.

We do not believe in special providences, but some who do, think that the annual departure of the Boylston prize from Boston to Europe is a visitation. And it is furthermore predicted that unless a less persimmon-like feeling soon prevails, the prize next time will be taken by some Russian female doctor who is not only an infidel, a nihilist, and an assassin, but who may even think Boston a small town in the West.

THE CONGRESS OF GERMAN SURGEONS.

It has been the custom for American surgeons to plume themselves upon being quite as good as any. There is good reason for this; at the same time, the papers and discussions at the Congress of German Surgeons, reported in another column, strikingly suggest that there is much to do yet before we attain pre-eminence. Certainly, our American Surgical Society is somewhat provincial when compared with the organization which met in Berlin last June.

Among the subjects most discussed at this Berlin meeting was, naturally, the treatment of wounds. The object of late experimentation seems to be to secure a dressing which is not only a perfect disinfectant, but which is also very absorbent. For this purpose, we find charcoal, sand, and "glass-wool," steeped in sublimate, paper ashes, dried peat, etc., recommended. One surgeon stated his belief that the iodoform era in surgery was over, and the impression is created generally that iodoform does not meet the demand for a model dressing.

The subject of the radical cure of hernia excited some discussion. Alcohol was recommended to be injected near the hernial sac, instead of the oak-bark solution used in America.

A highly interesting case was that of spleen extirpation, reported by Credé, Jr. The demonstration of the use of the œsophagoscope and gastroscope, by Mikulicz, the exhibition of excised stomachs, the reports upon the excision of the thyroid, the transplantation of muscle and the resection of the lung, naturally excited interesting discussions.

The characteristic of nearly all the papers read was that they represented something new in pathology or therapeutics, or operative procedure. A glance at the matter presented should have an educational value to the surgical societies, if not to the surgeons, of this country and England.

The Micro-Organisms in Acute Pneumonia.—Klebs, Ebert, Koch, and last Friedlaender (*Virchow's Archives*) have found micro-organisms in croupous pneumonia. They are of very similar size and form, being ellipsoidal in shape, nearly a micro-millimetre in length, and one-third less in breadth. Thousands can be seen within a single alveolus during the stage of red hepatization. In the majority of cases, they are not discovered in the alveolar or bronchial walls. Sometimes very large numbers are found in the lymph spaces.

Reviews and Notices of Books.

THE ANATOMIST: BEING A COMPLETE DESCRIPTION OF THE ANATOMY OF THE HUMAN BODY. Second Edition. With 171 wood engravings. By M. W. HILLES, formerly Lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine, etc. New York: G. P. Putnam's Sons. 1881.

ALTHOUGH originally designed as a condensed summary of the anatomical knowledge essential to the student about to present himself for examination at the Royal Colleges of Surgeons, this little work may serve as a cram-book for all English-reading students. It presents no special advantages over works of a similar character, except inasmuch as this second edition contains numerous small wood-cuts. Many of these are unusually good, being in part drawings from "Grey's Anatomy," considerably reduced in size, but still sufficiently large to aid the sorely-taxed memory of the student preparing for his degree.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. LEWIS SMITH, M.D., Clinical Professor of Diseases of Children, Bellevue Hospital Medical College, etc. Fifth edition. With illustrations. 8vo, pp. 836. Philadephia: H. C. Lea's Son & Co. 1881.

As compared with former issues of this work, the present fifth edition shows an improvement in several respects. To begin with, the author has succeeded in enhancing the practical utility of the book by a greater attention to details of treatment. Then he has omitted, as far as practicable, the rather barren discussion of theoretical problems, which, as a rule, only disappoint the student or practitioner who consults works of this kind with a view to instruction, information, or corroboration. Finally, several new diseases have been added to the list of those described in former issues. Dr. Pomeroy has also furnished a satisfactory chapter on strumous ophthalmia.

The verdict of the profession on Dr. Smith's treatise may be read in the fact that this fifth edition has evidently been called for, and in its present shape the volume will give welcome assistance, both to the young physician who is starting on his career, and the established practitioner who needs occasional consultation of a largely reliable text-book.

TEXT-BOOK OF MODERN MIDWIFERY. By RODNEY GLISAN, M.D., Emeritus Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Willamette University, etc. With 139 illustrations. 8vo, pp. 639. Philadelphia: Presley Blakiston. 1881.

AN obstetric voice out of the far West claims recognition, as "properly representing the peculiarities of American practice." Certainly a design of no mean ambition in an essentially *homo novus* in medical literature. For Emeritus Professor Glisan, of Willamette University, although an occasional contributor to the *American Journal of the Medical Sciences*, has yet to achieve a national reputation.

Meanwhile, the book before us is a good beginning, although it would be a rather poor ending. We apprehend that Glisan's treatise will not be able to largely replace the works of Leichman and Playfair, even in our own country.

Dr. R. P. Harris, of Philadelphia, has undertaken the supervision of the work, during its author's absence in Europe. And Dr. Harris appears to have become aware of the somewhat inadequate extent of Glisan's obstetric erudition, for he modestly emphasizes that the Western gentleman is an Eastern graduate, whose long experience has enabled him to obtain "that practical knowledge which gives a character and value to many portions of his work." This sounds like a confession or intimation that there may be some portions of the work which are deficient in such character and value. If Dr. Harris intended to be so understood, it argues well for his powers of discernment, because there are indeed "portions of the work" that must needs be rewritten before the book can presume to fairly represent American obstetric practice.

Doubtless the author has brought much diligence to bear upon the preparation of the volume before us, and that he has had an extensive obstetric experience no one will attempt to deny. But these are not the only qualifications which the author of a distinctly representative manual must possess before he can hope to receive universal recognition. The style of the book is often decidedly too chatty, wanting in true dignity, or mixed with the verdant flavor of the prairies.

Themes, illustrations, comparisons, and typical cases are drawn from a grab-bag, as it were, of a richly-varied experience, sometimes too richly varied. Yet the book is not without its substantial value, and especially the Western practitioner about to launch forth on his obstetric career can profitably read many a chapter of Glisan's treatise. With some judicious pruning, remodelling, with a little excision here and transplantation there, the book, even without a major operation, may change its countenance to such an extent as to make the second edition a true and fair exponent of American obstetric practice, which this first issue is only in part.

A HANDBOOK OF UTERINE THERAPEUTICS AND OF DISEASES OF WOMEN. By EDWARD J. TILT, M.D., Past President of the Obstetrical Society of London, etc. Fourth edition. New York: W. Wood & Co. 1881.

THE fourth edition of Dr. Tilt's practical treatise, although written several years ago, will still be found a useful and suggestive work to peruse. In spite of the fact that some very modern methods of treatment are necessarily conspicuous by their absence from the pages of this book, the author has so judiciously presented his subjects that little fault can be found with the manual. In fact, if a later revision had removed from it the traces that time has left, we could desire no more practical and common-sense treatise on uterine therapeutics than the present one. The body of the book will, nevertheless, be found to contain many lessons which may be as profitably learned to-day as they were a few years ago.

ESSENTIALS OF THE PRINCIPLES AND PRACTICE OF MEDICINE: A Handbook for Students and Practitioners. By HENRY HARTSHORNE, A.M., M.D., lately Professor of Hygiene in the University of Pennsylvania, etc. Fifth edition. Philadelphia: H. C. Lea's Son & Co. 1881.

THE present fifth edition of Hartshorne's treatise is essentially a somewhat modernized fourth edition. What was said of the former issues applies equally to this one. The author in endeavoring to do justice to the progress of medcine, has condensed within a very small compass much that is needful and essen-

tial to an understanding of the practice of medicine. But certainly many important details and notably valuable points in differential diagnosis must necessarily be omitted in a work of this kind. For the beginner, the book will serve its purpose, by familiarizing him with the elements of practical medicine, but the advanced student, and above all, the practitioner, will consult the book in vain for points not sufficiently explained in the lecture-room. Thus, while the book is valuable in its own limited way, it cannot in any sense replace the larger manuals on the subjects of which it treats.

A MANUAL OF OPHTHALMIC PRACTICE. By HENRY S. SCHELL, M.D. With 53 illustrations. 8vo, pp. 263. Philadelphia: D. G. Brinton. 1881.

THE author states that his object in writing this book is to give briefly the generally accepted principles of ophthalmology and to describe those methods of treatment upon which he has become accustomed to rely.

We can find no fault with the way in which Dr. Schell has carried out his purpose. The book is well written and has a sufficient number of good illustrations.

The recommendations for treatment are judicious. Regarding mooted questions, the author rather quotes authorities than insists upon his own. We should consider the book a very useful one to students and the general practitioner.

LECTURES ON THE PATHOLOGICAL ANATOMY OF THE NERVOUS SYSTEM, DISEASES OF THE SPINAL CORD. By J. M. CHARCOT. Translated from the Reports by Dr. E. Brissaud in the *Progrès Medicale*, by CORNELIUS G. COMEGYS, M.D. With illustrations. Cincinnati: Peter G. Thomson. 1881.

THE lectures contained in this book number seventeen. They cover the subject of the physiology and of the normal and pathological anatomy of the spinal cord. The secondary degenerations of the different tracts of the cord are especially dwelt upon. Prof. Charcot attempts here to furnish not a complete history of diseases of the cord, but rather the pathological anatomy of systematic and focal lesions with their relation to symptoms. This branch of the subject as well as much of value regarding the physiology of the cord is given most lucidly. Indeed to the American reader, the efforts of the lecturer to be clear are a little burdensome.

The translation is not a model for such kind of work, but no serious errors are made. The illustrations are poor, yet answer their purpose fairly well. The book is, of course, authoritative in the branches of which it treats.

THE ART OF VOICE PRODUCTION, with Special Reference to the Methods of Correct Breathing. By A. A. PATTOU, Author of "The Voice as an Instrument." New York: G. P. Putnam's Sons. 1882.

WHEN attention is called to the announcement in its official circular, that the American Laryngological Association has selected for one of the discussions at its meeting this year the subject "The Singing Voice, its Physiology, Pathology, and Treatment," no apology need be offered for the appearance here of this notice. As a clearly written, scientific, and practical exposition of the true principles of voice production, the above work is the best upon the subject we have ever read. While writing from the standpoint of a thorough musician, the author has made, as evidenced by his constant reference to standard medical writers, an exhaustive study of the physiological aspects of his subject, so that his opinions carry double weight. His plea for, and his explanation of the true "abdominal method" of breathing, and his suggestions as to the value of systematic vocal exercises for the relief of various disorders of the larynx are eminently sound and useful, and will be found exceedingly interesting by all classes of readers.

AN INDEX OF COMPARATIVE THERAPEUTICS, with Tables of Differential Diagnosis, a Pronouncing Dose-list in the Genitive Case, a List of Medicines used in Homœopathic Practice, with Memoranda concerning Clinical Thermometry, etc. By SAMUEL O. POTTER, A.M., M.D. Second edition. Chicago: Gross & Delbridge. 1882.

WE reviewed this book a short time ago. But little change is made in the present edition. It is a work of considerable interest, but will be more useful to the homœopath than to regular physicians. It illustrates a conformity of practice between the two schools which is not generally suspected.

THE MEDICAL ADVISER IN LIFE ASSURANCE. By EDWARD HENRY SIEVEKING, M.D. Second edition. Philadelphia: P. Blakiston & Co. 1882.

THE second edition of this work is not materially enlarged, but contains an index and is in other respects improved. Dr. Sieveking has collected a good deal of information not found in ordinary medical works, and he presents it in a pleasing manner. His book is intended especially for medical examiners and those interested in life assurance. To these it will prove a very useful manual.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 26, 1882.

DR. EDWARD C. SEGUIN, PRESIDENT, IN THE CHAIR.

DR. CARPENTER presented a specimen of

ANEURISM OF THE THORACIC AORTA

in behalf of a candidate.

DR. JANEWAY presented specimens illustrating

FIBRINOUS BRONCHITIS—THROMBOSIS OF THE PULMONARY ARTERY—ABSCESS OF THE LUNG WITH GANGRENE—EMPYEMA.

They were removed from the body of a man fifty-two years of age, an Italian laborer, who was admitted to Bellevue Hospital. The following notes were furnished by Dr. J. S. Thatcher:

April 20th.—His friends stated that for many weeks the patient had complained of not feeling well, and for a month he had not been able to work. Nothing more definite could be ascertained. On the day of his admission he fell while walking on the street, and was brought in by an ambulance. On admission his face was darkly congested, and the pupils were contracted. The tongue was coated, brown in the centre, and very tremulous. He was stupid. There was no eruption (typhus was suspected). On physical examination of the chest, evidence was obtained of incomplete consolidation of the lower lobe of the right lung and bronchitis in the left. Moist râles were heard all over the chest. There was no expectoration. The area of

splenic dulness was perhaps a little enlarged. The urine was amber-colored, cloudy, acid, had a specific gravity of 1022, and contained ten per cent. of albumen. His temperature at 9 P.M. was 102½° F.

April 21st. — Temperature, 3 A.M., 101½° F.; 4 P.M., 103° F. This afternoon he laid in a state of coma vigil. Later he passed into coma, and his appearance was as if moribund, although his pulse was quite full.

April 22d.—Temperature in the morning, 102½° F.; in the afternoon, 103° F. His mind was clear. Pupils less contracted.

April 23d.—Temperature in the morning, 100½° F.; at noon, 99½° F., and in the evening, 98½° F. His mental condition and the appearance of his face were improved. He had yellowish watery stools twice a day.

April 24th.—Temperature in the morning, 98½° F.; at noon, 99° F., and in the afternoon, 100½° F.; pulse, 125, and feeble; respiration, 38. He had passed into a state of muttering delirium.

April 25th.—Temperature in the morning, 101° F., and in the afternoon, 100½° F. The diarrhœa continued, omitting one day. The other symptoms remained without special change, and in the evening he died.

At the autopsy there were found bronchitis in the left lung throughout, circumscribed adhesions over the lower lobe of the right lung, forming cavities which contained purulent fluid. On section of the right lung there were found (1) fibrinous plugs in many of the bronchi, (2) thrombosis of the pulmonary artery, (3) abscesses, two or three, with surrounding gangrenous condition of the lung tissue. Probably the abscesses gave rise to the empyema, as they were covered by only a delicate layer of pleural membrane.

The probabilities were that the bronchitis was the primary pulmonary disease.

The liver and spleen showed evidence of malarial fever, as indicated by their pigmented condition. Both organs were slightly enlarged. The other organs were normal.

The empyema was evidently secondary to the abscesses and gangrene of the lung, and due to transudation of irritative material through the thin pleura which covered them. There was no evidence of pyæmia in any other part of the body.

It was the second case of thrombosis of the pulmonary artery he had seen within a few weeks. In the other case he predicted its existence as a cause of death in a case of myelitis, and was led to the conclusion by the fact that there was thrombosis of the femoral, and the patient was in the condition of collapse.

The localized empyema, probably, would not have been reached by the introduction of a hypodermic needle, as could be readily seen by the specimen. The inability to obtain fluid by means of a needle introduced into the chest does not necessarily prove that fluid is not present.

In this connection Dr. Janeway alluded to

ANTE-MORTEM THROMBUS IN THE RIGHT VENTRICLE.

He had long believed that in certain cases where the right ventricle becomes overdistended and death occurs, if the right ventricle could be relieved of a small quantity of blood, life might be saved. Not long since he introduced the needle of a large hypodermic syringe into the right ventricle of the heart of a man, who had just died of tubercular meningitis, and drew off a syringeful of blood. The result was entirely negative. The blood removed was black and fluid. He then threw in a solution of carbonate of ammonia without effect. But the experiment helped to explain the significance of heart-clot; for at the autopsy the right ventricle was filled with a firm, whitish, fibrinous clot. It served to confirm the opinion he had long entertained, that the more or less firm coagula found in the right ventricle at autopsy, are of post-mortem origin.

Dr. Ripley referred to the fact that in a large number of cases where the chest was full of fluid, puncture had been made without obtaining anything, except it might be a slight quantity of blood. Sometime ago he met with a case in St. Francis Hospital that gave the physical signs of fluid in the pleural cavity, and he introduced the hypodermic needle twelve or fifteen times before obtaining any at all, and when obtained it was purulent. He then made a free incision and removed sixty ounces of pus. He thought it probable that the needle, when fluid was not obtained, entered the curds, of which there was an abundance in the fluid removed.

Dr. Janeway said he had made eight punctures with a needle before finding fluid in the pleural cavity. The more common explanations of failures were the existence of adhesions into which the needle entered, the presence of cheesy material, which clogged the needle, and imperfectly constructed instruments.

Dr. J. A. Wyeth presented specimens which showed results obtained by the use of

BROAD ANIMAL LIGATURES APPLIED TO ARTERIES.

They consisted of the carotid arteries of a woman, a greyhound, and a horse which had been deligated with carbolized nerves taken from a calf. Specimens of ox-aorta ligature prepared and sent to him by Mr. Barwell, of London, and others prepared by himself, which he had successfully used in tying the subclavian and the carotid arteries, were also exhibited to the Society.

The carotid had been tied in September, 1881, to relieve intense pain and to arrest the progress of a malignant growth which had destroyed the right eye, filled the cavity of the orbit, sinus maxillare, sphenomaxillary fossa, and the sinuses of the ethmoid, sphenoid, and frontal bones. The ligature was the full size of the sciatic nerve of a calf six weeks old, taken and immersed entire in 5 per cent. carbolic acid twenty-four hours before the operation. The wound healed by first intention. The patient died seven months after the operation from the spread of the disease, which was temporarily arrested by the operation. The artery was completely occluded and its continuity unbroken. A depression, almost imperceptible, extending for the fourth of an inch, marked the exact location of the ligature, every other trace of which had disappeared. The same result was achieved in the carotid subclavian of another patient upon which he had tied these vessels with broad ox-aorta ligatures for aneurism of the aorta, the patient having lived a year and died of an intercurrent affection, not connected with the operation or the aneurism.

The carotid of the dog was also tied with the nerve-ligature. Five weeks later the animal was killed, the artery was completely occluded and the nerve had entirely disappeared.

The carotid of the horse was not occluded. There was a slight elevation of the endothelia at the point of application, but the ligature had evidently slipped within a few hours of the operation. The horse was not anæsthetized and was plunging, so that it

was with great difficulty the ligature was applied. Dr. Wyeth believed that he did not do this operation well. The nerve-ligature had been entirely absorbed.

He cited about twenty cases in which the broad tape-like ligatures had been used, and secondary hemorrhage had not occurred in a single instance. The iliacs, femorals, carotids, and subclavians were the vessels tied. There could be no doubt of the safety and efficacy of these ligatures as demonstrated at first by Mr. Barwell. He believed the nerve-tissue was the best broad animal ligature; it was strong, easily prepared, easy of application, was soft by virtue of the white substance of Schwann within its neurilemma, and it pressed upon such a large area of the vessel that while it occluded it perfectly, bruising the intima so that proliferation of the endothelia resulted, it did not cut any coat of the artery, and therefore did not entail the risk of secondary hemorrhage. Catgut nor any other ligature was free from this danger.

Dr. Geo. L. Peabody presented specimens illustrating

BICUSPID AORTIC VALVE WITH RECENT ENDOCARDITIS, TOGETHER WITH A PECULIAR FORM OF DOUBLE CARDIAC ANEURISM, AND CEREBRAL HEMORRHAGE IN A BOY EIGHTEEN YEARS OF AGE,

This been removed from the body of an American boy, eighteen years of age, who recently died in a hospital in this city, having lived only five hours after his admission. During these five hours he was pulseless at the wrist and unconscious. His pupils were contracted. There were no other symptoms of interest; and he being obviously moribund, but little was done for him.

His mother said that he fell suddenly from his wagon while at work as a porter, and was picked up in an unconscious state. From his mother there were ascertained, also, these facts: Three years ago he had rheumatism, which laid him up for six weeks. Eighteen months ago he began to be troubled by swelling of the feet, which had been intermittent ever since then. During this same period he had complained of pain in his chest, which had never been severe. In addition to these symptoms he had been much annoyed by drowsiness during the daytime. It was an interesting fact that he had never complained either of dyspnœa or of palpitation.

The autopsy was made twelve hours after death. All the organs were substantially normal except the brain, heart, and spleen. The spleen was large, but structurally normal.

The brain presented an extensive hemorrhage in the left hemisphere. Just behind the optic thalamus, in the floor of the left ventricle, freshly coagulated blood made its appearance in the cavity of the ventricle, and upon cutting into the floor, the large blot seen was exposed. It extended nearly to the surface of the brain in a downward and outward direction, coming within a centimetre of the surface in the upper part of the sphenoid lobe.

The vessels at the base were normal and no embolus had been discovered. The brain in the neighborhood presented the usual small punctate hemorrhage which are found in the vicinity of a large clot. Search had not been made for miliary aneurisms.

The heart, so far as Dr. Peabody knew, was an unique specimen. There was a small amount of hypertrophy and dilatation of the left ventricle, and on one side the endocardium was distinctly thickened. There were but two cusps to the aortic valve, which were of the same size, signifying that the lesion was congenital. He had recently presented to the Society a heart which showed the same lesion. The two cusps were very deeply ulcerated, and upon them were situated large masses of fibrine. Just beneath the attached border of one of the cusps, and just above the attachment of the mitral valve, were to be seen two nearly circular openings in the endocardium and muscular walls, the diameter of one of which was about five millimetres, the diameter of the other being less than half of this size. These two openings lead into two small sacs on the outside of the heart, situated just above the auricular appendage on the left side. The larger of these sacs—which was in relation with the larger opening—was about large enough to contain a small-sized English walnut. At the autopsy it was found full of recently coagulated blood. The smaller of the two sacs was situated wholly within the larger one and was less than one-quarter of the size of the latter. It was interesting that these two sacs, whose walls were made of dense, firm, connective tissue, did not communicate with each other at all. There was, then, a double aneurism of the heart, of most peculiar character. Its situation, too, was extremely unusual for aneurisms of the heart.

It was to be regretted that the clinical history was so meagre.

(To be continued.)

NEW YORK SURGICAL SOCIETY.

Stated Meeting, May 9, 1882.

Dr. T. M. Markoe, President, in the Chair.

Dr. L. M. Yale read a paper entitled

CASES TREATED WITH PHENIC ACID (DÉCLAT).

Dr. R. F. Weir referred to the case mentioned by Dr. Yale in his paper, and also to a case of puerperal septicæmia, in Dr. Polk's service at Bellevue Hospital, that seemed to be benefited by the phenic acid treatment. His experience, however, in the use of the remedy in the New York Hospital had not been satisfactory. Recently the antipyretic influence of phenic acid had been tested in private practice in a case as follows: A man pricked his thumb with a thorn. An abscess in the hand followed, which was opened, and the swelling disappeared from the hand, but soon afterward the patient was seized with a chill. His temperature rose to 105° F., accompanied with great prostration, sweats, etc., and evidence of pleuro-pneumonia developed. He was put upon the use of phenic acid for three days, during which time the exacerbations remained unchanged, the temperature varying from 99° to 105°. He took in the time the equivalent of sixteen grains daily of pure carbolic acid, by injection, besides the ammonio-phenate syrup internally every two hours. The temperature was not at all affected by such dosing.

Such cases as these, as well as others, where the acid had been even more freely used, and in some cases of high temperature of surgical origin, where Lister's dressing had been followed by symptoms of marked poisoning, without a reduction in the temperature, would lead him to qualify materially the favorable impression he had at first received concerning the efficacy of phenic acid from its use in his wards at Bellevue Hospital during the early months of the year.

Dr. Stimson remarked that in the case of carbolic acid poisoning he had already reported, the temperature fell to 92° F., and remained subnormal four or five days. The case terminated fatally, but there were no signs of septicæmia after the first appearance of the symptoms of poisoning by carbolic acid, and he had regarded the case as one of cure of septicæmia, but death from poisoning by carbolic acid.

Dr. E. L. Keyes referred to cases in his service at Bellevue, which were entrusted to the care of Dr. S. Alexander, who was much interested in the method, and had carried it out thoroughly, in some cases in the service of Dr. Polk. One was a case of erysipelas of the foot, that seemed to do remarkably well, for it lasted only two days. Another was a case of erysipelas of the entire leg, and injections were used persistently, but no appreciable effect was produced upon the temperature, and the disease lasted ten or twelve days. He had seen it used in several cases where high temperature was present, but without the least effect.

Dr. Alexander got a dissecting wound, which was soon attended by considerable pain, swelling of the neighboring glands, etc., and he injected himself sub-cutaneously at appropriate intervals during twenty-four hours, with the effect, as he thought, of aborting the poisonous process.

Dr. Keyes had used the syrup of the ammonio-phenate in private practice, and the only case in which it seemed to exert a favorable influence was the following: A frail, anæmic young woman, two years ago, had considerable faucial erythema, and twenty-four hours afterward, facial erysipelas developed, beginning upon the nose. She was kept in bed ten days and then recovered. Last year she escaped. But in 1882 she came to his office on a certain day complaining of sore throat. On examination there was found upon the side of the soft palate, a patch of erythema an inch long, half an inch wide, and elevated an eighth of an inch. It was shining, had a distinct margin, and was livid red. The tonsil was not involved. The condition was similar to that which existed at first, two years ago. There was a febrile movement, and the patient had no appetite. The syrup of the ammonio-phenate was given, the patient recovered within two days and had no facial erysipelas. About a week afterward a patch of distinct erysipelas appeared upon the side of the nose, and while still taking the syrup in reduced doses. She then went to bed, took nothing except the ammonio-phenate, with milk and a small quantity of the tincture of iron. The erysipelas spread and covered the face, forehead, and both ears, but ran its whole course in about five days. He thought that in this instance the remedy shortened the duration of the disease.

Dr. C. K. Briddon referred to a case of suppurating fungous arthritis, which came under his observation in the Presbyterian Hospital. The temperature was from 102° F. to 104° F. Amputation was performed, and the temperature still continued high for two weeks, when the syrup of the ammonio-phenate was administered, and the temperature came down at once and remained, and the general condition of the patient had very much improved, appetite returned, etc.

Without making any definite statement, he had been aware of injections of the remedy being used on the medical side in the same hospital, but without any effect upon the temperature of the patients.

Dr. J. W. Howe thought it hardly fair to attribute recovery, in one of Dr. Yale's cases, to the phenic acid, while the patient was taking at the same time iron, whiskey, and digitalis.

Dr. Yale remarked that the improvement began after the use of phenic acid was commenced. However, he gave the cases for what they were worth, without special endorsement of the method, hoping to have its value somewhat disclosed by the discussion.

Dr. Weir also referred to a case of *tumor* in which the remedy had been used. Late in the Autumn of 1881, a patient came to him with a swelling in the submaxillary region, upon the left side, which followed a slight injury of the parts. It was hard and knobbed, and projected somewhat into the floor of the mouth, and led to the suspicion that it was sarcomatous in character. The patient was put upon large doses of arsenic, which was continued for some time, but apparently without effect, and was then discontinued. On seeing the patient a short time afterward, to discuss the advisability of an operation, it was found that the tumor had diminished somewhat in size. The patient remained only a short time longer under observation, but when last seen the shrinkage in size was marked. Dr. Weir learned that subsequently he had been treated by Dr. Déclat by spraying the external surface of the tumor and the inside of the mouth with carbolic acid, and by the internal use of the syrup of the ammonio-phenate. At the end of a month or six weeks the tumor disappeared. Dr. Weir was not aware that the tumor had been treated by injections of phenic acid.

His own experience in the use of carbolic acid (Calvert's No. 1 and Bowdler & Brekersdike's) did not encourage him to hope for much good from such injected into the substance of a tumor except in angiomata.

Dr. H. B. Sands said that he had been reluctant to accept the statements made in favor of the remedy, mainly because it had been announced as a kind of panacea. It seemed to him that if it possessed the marvellous properties ascribed to it, this fact would long ago have been corroborated in Dr. Déclat's native country. Dr. Sands did not wish to deny the value of carbolic acid in the treatment of erysipelas, but thought the evidence offered by Dr. Yale inconclusive. Erysipelas, like acute rheumatism, was a disease very uncertain in its progress, and one, therefore, in which it was difficult to estimate the effect of remedies. In the Roosevelt Hospital, last winter, he removed a parotid tumor. A few days afterward, erysipelas developed, and ran its course in three days. Recently a gentleman came to his office, with erysipelas of the scalp, and said that he had derived great relief from the application of Witch Hazel. He was allowed to continue the use of it. Several days afterward he presented himself again, having entirely recovered.

The case of pyæmia, related by Dr. Yale, was the most striking of all, and yet in that instance the disease was chronic rather than acute, which would throw it out as an illustration that the remedy has any efficacy in controlling the disease.

He had recommended a trial of the remedy in cases of malignant tumor which were inappropriate for operation, but had nothing favorable to report.

He knew of a case of enchondroma of the thigh occurring in a man forty-five years of age. The tumor had been growing for fifteen years, extended from the region of the knee to the hip, and its estimated weight was twenty-five pounds. Amputation was advised.

In the meantime injections of phenic acid were proposed, and accepted by the patient, and soon after one of these was given the patient was seized with a chill and subsequently died of pneumonia.

DR. KEYES had seen recovery take place in one case of diphtheria while the phenic acid was being used, and two patients, one sick with scarlet fever and the other with puerperal fever, had died while it was being employed.

HERNIA—REDUCTION BY TAXIS UNDER ETHER—SUDDEN DEATH AN HOUR AND A HALF AFTER COMING FROM UNDER THE INFLUENCE OF THE ANÆSTHETIC.

DR. YALE narrated a case as follows: A man, fifty-five years of age, had had a large hernia for many years, and had been in the hospital several times for its reduction. Once it was reduced after prolonged taxis, without an anæsthetic. Later it was reduced under an anæsthetic. The last time he entered the hospital the hernia had come down and formed a tumor that reached to within three inches of the knee. When Dr. Yale first saw him taxis had been resorted to and the tumor partially replaced, but there remained a mass as large as a good-sized musk-melon. He directed that a large enema be administered, taxis again be employed, and an anæsthetic be used if necessary. The other means failing, ether was given, and the hernia was reduced without special difficulty. The patient came from under the influence of the anæsthetic apparently, but about an hour and a half afterward was seized with coughing, as if something had entered the larynx. He became cyanotic, and the House Surgeon fearing that death was imminent, made an incision through the skin for tracheotomy, when the patient coughed out what seemed to be strangling him, and at once breathed freely, but without a renewal of the difficulty of breathing he suddenly expired.

The autopsy was conducted by Dr. Janeway, and nothing was found to account for the sudden death.

Dr. Yale regarded it as belonging to the class in which death occurs late after the use of an anæsthetic.

DR. WEIR referred to the explanation given by Hunter, of Philadelphia, of some of the deaths which occurred late after the use of anæsthetics—namely, from Bright's disease, the existence of which had been unknown until revealed by autopsy.

While an interne in the New York Hospital, a man came in with a large hernia, which was reduced, and the patient suddenly died, and the explanation then offered was that death was caused by the sudden return of a large mass of intestines to the abdominal cavity.

THE PRESIDENT said that it would almost seem as though there was some direct relation between the reduction of large herniæ, the administration of an anæsthetic, and sudden death. Several years ago he had a case, in which the patient died while upon the table.

REMOVAL OF A PORTION OF A NEEDLE FROM THE ARM.

DR. A. C. POST referred to the case of a man who appeared at his clinic complaining of some foreign body under the skin of the arm. An incision was made and the body found to be the pointed end of a needle a little more than two centimetres in length. It was there without any knowledge on the part of the patient as to how it came there.

CONTRACTED PREPUCE.

DR. POST also referred to the case of a child, a little more than a year old, that had a long prepuce, but not contracted so that it could not be drawn back. With some difficulty he succeeded in clearing it from the glans as far back as the corona. But he performed circumcision, and released the parts entirely. He supposed that the agglutination or adhesion was due to a low grade of inflammatory action excited by lack of cleanliness.

DR. WEIR suggested that the adhesion might be due to lack of development.

DR. POST remarked that he was able to separate the prepuce from the glans without the flow of blood, although it was exceedingly close.

POST-PHARYNGEAL ABSCESS.

DR. H. B. SANDS narrated a case as follows: About two months ago he was called to see a patient, in consultation with Dr. J. Lewis Smith, and was asked to open what was thought to be a glandular abscess in the neck of an infant. The patient was a puny child, about six months old, who had been sick for two weeks with symptoms of inflammation of the neck: Upon examination, a tumor, previously noticed, was seen lying in front of the sterno-mastoid muscle, extending up to the angle of the jaw, and reaching downward half way to the clavicle. It was not very prominent, was soft, apparently fluctuating, and quite yielding. On inquiry it was found that the child had some difficulty in swallowing and breathing, and, at the time, respiration was embarrassed and the child breathed with a loud noise. Dr. Sands suspected the case to be one of post pharyngeal abscess, and Dr. Smith had entertained the same suspicion, but the result of his examination had been negative. Dr. Sands introduced his finger into the throat, but was not satisfied that there was any swelling in the pharynx. At the same time he was not certain as to the existence of abscess of the neck, and therefore proposed to tap the swelling, and if pus was obtained to evacuate the abscess by incision. No ether was given. He thrust the hypodermic needle into the swelling to the distance of an inch, but obtained no matter. A second puncture was made, with a negative result. He then examined the tumor a little more carefully by palpation than he had done before, and was surprised to find that it almost entirely disappeared, the neck becoming nearly as flat as upon the opposite side. He then again explored the throat with the finger, and detected a bag-shaped swelling just where post-pharyngeal abscesses are usually found. He then proceeded to use a tongue depressor, and the moment the part was exposed to view the child ceased breathing, became cyanotic, and seemed likely to die. Without seeing the parts, but using the forefinger as a guide, Dr. Sands thrust a knife into the abscess and made a free incision, allowing the escape of about a wine-glass of pus. Artificial respiration and cold water affusion soon restored animation, and the case afterward went on to complete recovery.

CAUSALGIA.

DR. C. T. POORE related a case with the following history: A married lady fell in August last, turning her foot inward, and is said to have chipped off the external malleolus. A plaster-of-Paris dressing was applied, and after four weeks it was removed, and she was allowed to go about. She has ever since

had some pain about the ankle. About the first of January she begun to experience a burning pain on the plantar aspect of foot, corresponding to the distribution of the external plantar nerve. This has gradually increased, and when at its height is accompanied by shooting pain in the foot, extending up the leg; swelling and redness on the under aspect of the foot in that location. The pain is brought on by wearing a boot and allowing the foot to hang down. It is absent, or nearly so, when she wears a slipper. There is some slight tenderness over the posterior tibial nerve, behind the internal malleolus, but pressure on this nerve does not cause the peculiar burning pain. There is also twitching of the toes when the pain is intense. There has never been any eruption or glazing of the skin, nor any change in the condition of the nails.

Dr. Post had met with a number of cases of painful affection of the foot, the cause of which had been entirely unknown. There was increased sensibility upon pressure, and certain spots were excessively sensitive. In some of them he had afforded relief by the hypodermic injection of chloroform, in others, by the use of the actual cautery, but some of them had been obstinate.

Dr. Weir asked if Dr. Post could recall what particular spots on the foot were chiefly affected.

Dr. Post answered, the heel, the side of the foot, the anterior part, and, in some cases, the dorsal surface.

Dr. Weir had seen cases in which a painful spot existed between the fourth and fifth metatarsal bones, at the distal ends. According to Mitchel and Morton, the pain in such cases is due to pressure of the fifth metatarsal bone upon the nerve which lies between it and the adjacent bone. He had excised the head of the fourth metatarsal bone in two cases, with the result of affording immediate relief from all pain.

Dr. Yale had seen a case in the wards of the late Dr. Mason almost precisely like that related by Dr. Poore, and in which relief was afforded by excision. He had also seen a case in which the pain originated between the two extremities of the plantar fascia.

HERNIOTOMY.

Dr. E. L. Keyes reported a case with the following history: A young man entered his service at Bellevue Hospital with an exceedingly solid, tense hernial tumor on the right side, which his house surgeon had tried to reduce under ether, without success. The patient said that his hernia had been gradually increasing in size ever since he was a boy, but that he could always reduce it at will. On the following morning Dr. Keyes cut down upon it, found a very solid white mass, which was so firmly attached as to require dissection to liberate its adhesions from the sac. A number of bleeding points were ligated with catgut, cut short, and the whole oozing surface was freely touched with a red-hot Paquelin cautery. A strangulated piece of small intestine, two or three inches long, was found posteriorly. There was very little fluid in the sac. The hard mass had been incarcerated, but it was not a congenital hernia, since the tunica vaginalis did not communicate with the sac, and consisted of large intestine, as proved by its connection above, although it was apparently completely solid. He reduced the entire mass after serious deliberation. He feared to leave it out, because the patient had been on a prolonged spree, and delirium tremens was to be expected. The enlarged internal ring, after reduction, remained sufficiently patulous to admit three fingers abreast. This was closed with deep sutures. The wound was treated antiseptically. Within twenty-four hours the patient had an attack of delirium tremens, requiring a strait-jacket for a week. Localized peritonitis developed under the right hypochondrium, which went on to suppuration. A deep abscess was opened about midway between the anterior superior spinous process of the ilium and the border of the ribs. Pus was abundant but laudable. Dr. Keyes thought it originated in localized suppurative peritonitis. The patient made a perfect recovery, with his hernia radically cured.

The Society then proceeded to the transaction of miscellaneous business.

THE ELEVENTH CONGRESS OF THE GERMAN SURGICAL SOCIETY.

Held in Berlin, May 31 *and June* 1 *and* 2, 1882.

Professor Langenbeck, President.

(Special Report for The Medical Record.)

Many of the most eminent of German surgeons were present, including Billroth, Esmarch, Thiersch, Volkmann, etc.

The scientific work began with a paper by Von Bergmann, of Würzberg, upon the

BLOOD-CHANGES IN ACUTE INFECTIOUS DISEASES.

He claimed that some infectious diseases are produced by organized parasitic bodies; others by unorganized, soluble ferments, similar in nature to pepsin, trypsin, etc. Bergmann further averred that these infecting agents acted upon the white corpuscles of the blood, destroying or dissolving them. This caused a thickening of the blood and an increased tendency to coagulation, facts which explained the capillary thrombosis, especially in the lungs and intestine, with resulting inflammations.

Herr Braun, of Heidelberg, read a paper upon

MALIGNANT STRUMA,

in which he referred to the difficulties of removing excessively large and malignant swellings, especially in the neck. Herr Braun also read a paper upon "Ligaturing the Femoral Vein near Poupart's Ligament." He had found that it could be done without necessarily stopping the circulation in the extremity.

Schwalbe, of Magdeburg, read an article upon

THE RADICAL CURE OF HERNIA.

The author used an injection of seventy per cent. of alcohol in the neighborhood of the hernial sac. This method he considered entirely harmless and very effective. He reported a number of successful cases. Sometimes many injections had to be made, and in one instance the number reached was 150. Schwalbe referred to the American (Heaton's) method of injecting an oak-bark solution. His own method is evidently an imitation of this. He thought the oak-bark less useful, however, than alcohol, on account of its slighter power of diffusion.

In the discussion, Ranke said that he had obtained good results in children, but had had less satisfaction in older cases.

Gussenbauer had used the method in six cases, but it was too early for him to draw conclusions regarding it.

MIKULICZ, of Vienna, read a paper upon

GASTROSCOPY AND ŒSOPHAGOSCOPY,

with demonstration upon a living subject. He gave a description of the instrument and of the difficulties to be encountered in its use. The accumulation of mucus and saliva was prevented by laying the patient on his side. The retching, vomiting, etc., could be prevented by morphia narcosis. With the help of the instrument, Mikulicz had been able to diagnose easily the presence and character of foreign bodies in the œsophagus, also the presence of cancer there. He had found that the upper part of the œsophagus was a closed tube; the lower part, including the cardia, was open. He had discovered five or six cases of a tubular dilatation of the œsophagus to the size of the arm, due probably to an obstruction at the cardia. In certain positions the beat of the aorta can be felt, and the author thought that the instrument would be useful in diagnosing aneurisms of that vessel.

In the discussion, NITZE and GUSSENBAUER deprecated the use of the instrument. The latter related the case of a patient in whom it had injured the gastric mucous membrane dangerously.

LANENSTEIN, of Hamburg, showed a

RESECTED PYLORUS.

The patient had had a gastric ulcer, with great thickening of the walls. Death followed the operation.

RYDIGIÈR, of Culm, showed another resected pylorus for gastric ulcer. The patient in this case lived. The case has been reported in THE RECORD.

TAUBER, of Warschau, read a paper upon the

CHANGES OF THE INTESTINE IN A LONG-STANDING ARTIFICIAL ANUS.

The case showed that an almost entire closure of the intestine had gradually taken place.

SCHEDE, of Hamburg, read a paper upon the

TREATMENT OF GENU VALGUM.

He discussed the relative merits of cutting and bloodless operations, preferring the former for older patients. The author especially recommended the method, as yet little used, of "osteoplasty," or fracturing the bones. Two years before he had first tried it in a very severe case of genu valgum, with surprisingly good results. Since then he had constantly employed it with unvaryingly good results. He had fractured the femur thirty-three times and the tibia thirteen times. In eight days after these operations the child can stand; in four to eight weeks healing is perfect. The bones can be broken with the hands. The limits of age in which this operation applies are two and five years. In older cases Schede recommends osteotomy.

In the discussion, MIKULICZ referred to the difficulties and disadvantages of ordinary apparatus, and commended Schede's method in young children.

SONNENBURG, of Berlin, described an apparatus which drew the limb into proper shape, and said that he had treated his cases very successfully with it.

WINIWARTER had in the past five years used torsion, and he had often produced a double fracture of tibia or femur at one sitting. The cases healed easily.

BIDDER discussed the etiology of the deformity and thought it was often brought about or increased by the way in which the infant was carried, either *always* upon the left or upon the right arm. The knee was thus pressed into the angle between the thorax and abdomen and deformity produced.

SONNENBURG, of Berlin, read a paper

UPON THE USE OF PERMANENT BATHS IN THE TREATMENT OF SURGICAL DISEASES.

This method of treatment had been in use for about a year in the Surgical Department of the Royal University Hospital as well as in the Jewish Hospital. An apparatus is made by which the affected part is kept constantly in warm water of a steady temperature. The water continually flows off and is renewed. The advantages are: pain disappears entirely, the fever falls, the wound secretions are lessened and carried away, the duration of healing is shortened; complications do not occur. The method is applicable in a wide range of cases, but especially when there are large cavities or surfaces, as in the neighborhood of the pelvis, in operations about the rectum, uterus, bladder, and peritoneal cavity. It is particularly useful in cases of profuse suppuration, chronic caries, in lithotomy, and in resections, fistulæ from joint diseases, etc.

In the discussion HAGEDORN, of Magdeburg, said that he had used permanent baths for twenty years in all lithotomies, and with good results. He also had used them in extensive burns and phlegmons. A temperature below 30° R. soon becomes unpleasant to the patient.

SCHEDE had used the permanent baths for six years quite extensively, but he reserved them rather for chronic cases. Thus a woman seventy years old had a compound fracture of the leg. She speedily developed bed-sores, and would undoubtedly have died but for the baths. She was kept in a bath for ten months, when she was cured. The permanent bath is a form of antiseptic treatment often useful when other means fail or cannot be applied.

SONNENBURG said that the temperature of the water may be varied. Some patients preferred it cooler than others. The age of the patient was no contra-indication; the duration could also be very long.

BARDELEVEN referred to Weber's use of salt in the water, in order to diminish the activity of the granulating process. He had himself added thymol (1 to 1,000) to secure an antiseptic effect.

HERR KÜMMELL, of Hamburg, read a description of a

NEW METHOD OF TREATING WOUNDS AND THE USE OF CORROSIVE SUBLIMATE IN SURGERY.

The attempts to get all the advantages of a perfectly antiseptic dressing, with the simplest methods, had led to many experiments. The iodoform dressing had become very popular, but, in Kümmell's opinion, its era was past.

An excellent dressing was a mixture of heated charcoal with clay, in the proportion of 1 to 7. It possessed not only great disinfecting but powerful absorbing properties. The first dressing can be left on for one or two weeks, and there is no inflammatory reaction or disturbance. The substance is especially good in large cavities, as after operations near the rectum. The powder sticks so closely to the surface that it is not easily washed away. In eight or ten days it may be removed and the wound dressed with basilicon ointment.

The above dressing, however, the author found to be dirty and to have some disadvantages. He therefore experimented with corrosive sublimate. It is known

that solutions of this, of the strength of 1 to 1,000, destroy bacteria. Kümmell used solutions of the strength of 1 to 2,000, washing the wound with it. Instruments, catgut, and dressings are disinfected completely by soaking twelve hours in a 1 per cent. solution. Kümmell also used as a wound-dressing fine quartz sand, heated, and then disinfected with a solution of sublimate. This seemed especially advantageous for primary healing. He also used fine spun glass, or

GLASS-WOOL,

and considered it useful on account of its draining property. The fine threads of glass lying together acted as capillary tubes. The wound-surface could also be examined to some extent through the transparent dressing. There is no irritation from this substance, and primary intention occurs very certainly. Herniotomies under this treatment have got well in five to eight days, necrotomies in fourteen days. Either the sand or the glass-wool method is very simple.

(To be continued.)

Correspondence.

DR. TRAILL GREEN AND THE ERUPTIVE DISEASES OF CHILDHOOD.

To the Editor of The Medical Record.

Sir: The essay on "Medicine and Something More," which I read before the late meeting of the Medical Society of Pennsylvania, of which brief mention was made in The Record, was prepared to call the attention of the society to the duty of instructing the laity on various subjects connected with health and peace of mind with reference to disease, as well as to prescribe medicine. In the last number of The Record I read an article on measles, the author of which expressed himself as greatly pained by reading the brief notice referred to above. It would seem to be unnecessary to offer relief to him, as in the next paragraph of his article he says: "I am ready to grant that Dr. Green has good authority for making such statements," and he quotes Dr. Thomas, in "Ziemssen," Trousseau, and others, bringing forward a large amount of evidence which I had not seen, or which I had forgotten if I had seen it. What I wrote was based on my own observation, and I thought the subject worthy of the consideration of the profession.

I copy here that part of the essay which may have been misunderstood. I hope Dr. Gibney and other friends will not charge me as guilty of professional heresy after they have read this extract from the essay:

"I have observed that there has been a growing fear of diseases which we thought, not many years ago, were not of a serious character. I refer to the diseases of childhood, and especially to those of the eruptive class. Here is an instance in point: A young lady was in attendance as a pupil in a boarding school in one of our cities, and there had an attack of chicken-pox. She was isolated from the other members of the household, and no one was permitted to see her but the matron. The young lady was so lonely, separated as she was from all her companions, that she wrote to her father, who instantly ordered her home; and she returned, performing the journey without inconvenience, but not without expense and interruption of study, which was more serious. A physician had not been called to see her at her school-house.

"Now, I would ask, Is it not shameful at this time in the nineteenth century an intelligent lady, having charge of a school for the education of girls, should subject a scholar to solitary confinement because of an attack of varicella? What could she have learned from a physician, in her girlhood home, of the character of this trifling disease? What was impressed upon the minds of the young women gathered in this school who are to preside in homes in their womanhood? Might not this intelligent teacher have supposed that a very large number of her pupils must have had chicken-pox, and that the remainder of them would not have been seriously hurt if they had taken the disease?

"Rubeola we see treated by mothers without the help of a physician, and all that is needed in many cases that we are called to see is a mild, cooling treatment; and yet we meet with individuals now and then who are greatly alarmed when an epidemic of this disease occurs. I shall never forget a visit to a man in bed ill of measles, with all the bedding of winter weather over him, and a thick winter suit of clothes on him from head to feet, his thick winter coat buttoned over his chest, and a thick woollen scarf around his neck. He was as hot as a man could be, and in piteous tones he said: 'Doctor, I am afraid I shall take cold!' I ordered him out of bed, commanded him to take off his day garments, and go to bed as a sensible man should, in his bed-garments. He was living when I last heard of him.

"Some years ago as an epidemic of measles was passing over the community in which I live, I was asked by an intelligent woman, the mother of three children, whether I thought she would be affected by the disease. I said to her that I had not the least doubt of it. She replied, 'You are a good comforter.' I said, 'Madam, in this epidemic every one who has not had the disease is attacked by it.' I had observed it, and I told her what I knew was true. In a short time her children had the disease, and very soon she was in her bed with it, sick almost unto death.

"This woman's mother had for years been in bondage from fear of measles. She took special care to keep her daughter from associating with children who had this disease, and, I believe, took such care of her as to shut her within doors when it was prevailing. I never saw a case like hers. She was sick for weeks, was greatly reduced in strength and flesh, and just escaped with her life. On one of my visits, when she was convalescent, she said to me, 'Doctor, Congress ought to pass a law that no woman shall be allowed to marry until she has had the measles.' I have no doubt she thought her mother a very silly woman, so far as her views of measles were concerned. An attack in childhood would, most probably, have been mild, and before she reached adult life would have been forgotten.[1]

"I believe these diseases help to establish good health. I doubt not you have seen children who did not grow well, who were feeble, who would after an attack of one of the eruptive diseases of childhood commence to grow, and soon become strong and healthy persons.

"In relation to small-pox, and the sure protection which we have in vaccination, it must be ad-

[1] The comparative mildness of the disease as it occurs in childhood is well known.

mitted that we do not give instruction as we should to the families we visit, or that we have no influence over them as medical men. Why is it that there is so much doubt as to the protection which we know is afforded by vaccination? Why should a vaccinated community become so thoroughly demoralized when a case of small-pox appears in it? The only answer we can give is this, we have not instructed the people.

"In the report of Northampton County, presented to this meeting of the society, I have given my experience relative to vaccination, and I will not repeat what I have written in that report. I will only say in this connection that in a practice reaching through almost fifty years, I have not seen a case of small-pox or of varioloid in any person vaccinated by myself. I have, in all the families I have attended, been careful to see that the vaccination was successful, and among them all I do not know an individual who would object to being revaccinated or refuse vaccination to a child."

Thus far the extract from the essay.

I see no call for a disclaimer, and I would not blot a word which I have written. Dr. Gibney sustains my position in what he says as quoted above; indeed, many of the cases he cites prove more than my observation justified me in attempting to prove.

Furthermore, Dr. Gibney admits that the disease, as it appears in the rural districts, differs from the disease as it occurs in cities. With us, as already stated, the disease in many cases is so mild that the mothers of the children safely conduct the whole treatment. I have never seen a case of diseased bones or joints which I could trace to measles as a cause; and it must be remembered that every one, sooner or later, has an attack of measles. It is quite easy, therefore, to say that this or that disease followed an attack of measles; but it is not so easy to determine how far the eruptive disease acted as the exciting cause. We should ask: Do not these diseases occur after various other diseases? Do they not occur when children have not had any of the peculiar diseases of childhood? The crowded tenement houses of cities certainly furnish cases of disease, in scrofulous children, which cannot be traced to any cause save the bad air, poor food, and general unfavorable hygienic surroundings.

I find but one record of death from measles in my notes of a long practice, and this occurred in an out-patient of the Fifth Street Dispensary, Philadelphia, an institution with which I was connected in the first year of my practice. The child was attended in a home such as the cities furnish to the poor. I was young in my professional life, but I had the assistance of the late Dr. Hugh L. Hodge, who was one of the consulting physicians of the dispensary. This case occurred in the early summer, when the narrow streets and crowded houses of the poor do not aid us in our work. I have seen many epidemics of measles since, and I record my testimony as to the mildness and usually favorable termination of measles in the rural districts and healthy towns.

TRAILL GREEN.

DEATH DURING SOMNAMBULISM.—Lieut. Child, of the British Navy, jumped overboard in a sleep-walking state, recently, and was drowned. He dreamed, it is supposed, that he heard the cry of "man overboard," and rushed upon deck at once to save a comrade.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 9, 1882, to July 15, 1882.

GREENLEAF, C. R., Major and Surgeon, now awaiting orders, to report in person to the Commanding Officer, Columbus Barracks, Ohio, for duty as Post-Surgeon at that post. S. O. 160, A. G. O., July 12, 1882.

FORWOOD, WM. H., Major and Surgeon. To report in person to the Lieutenant-General at Fort Washakie, Wyo., on or about July 23, 1882, for duty as Surgeon and Naturalist, on the tour of inspection and exploration to be made by the Secretary of War and the Lieutenant-General. S. O. 70, Department of the Platte, July 6, 1882.

BROOKE, JOHN, Capt. and Asst. Surgeon. Having reported at these Headquarters, is assigned to duty as Post Surgeon at Angel Island, California. S. O. 120, Military Division of the Pacific and Department of California, July 7, 1882.

GIRARD, J. B., Capt. and Asst. Surgeon. Relieved from duty at Fort Grant, A. T., and assigned to duty at Fort Lowell, A. T. S. O. 106, Department of Arizona, July 3, 1882.

BYRNE, C. B., Capt. and Asst. Surgeon (Fort Barrancas, Fla.). Granted leave of absence for one month, with permission to leave the Department and to apply for an extension of two months. S. O. 68, Department of the South, July 12, 1882.

HAVARD, VALERY, Capt. and Asst. Surgeon. Relieved from temporary duty at these Headquarters, and at post of San Antonio, and assigned to duty as Post-Surgeon at Fort Duncan, Tex. S. O. 68, Department of Texas, July 5, 1882.

FINLEY, J. A., Capt. and Asst. Surgeon. Assigned to duty as Post-Surgeon at Fort Concho, Texas (Fort McKavett abandoned). S. O. 68, C. S., Department of Texas.

BARNETT, RICHARDS, Capt. and Asst. Surgeon. To accompany the Brigadier-General commanding on his journey to Forts Boidger, Wyo., and Thornburgh, Utah. S. O. 70, Department of the Platte, July 6, 1882.

POWELL, J. A., First Lieut. and Asst. Surgeon. To report to the Commanding Officer, Fort Davis, Tex. for duty (Fort Stockton, Tex., abandoned). S. O. 68, C. S., Department of Texas.

GORGAS, W. C., First Lieut. and Asst. Surgeon. When relieved by Asst. Surgeon Havard, to report to the Commanding Officer, Fort Brown, Tex., for duty. S. O. 68, C. S., Department of Texas.

AN UNHAPPY MISTAKE.—A very sad case is reported from Waukesha. Wisconsin. Dr. Hugo Philler, who is said to be an aged and most trustworthy and experienced physician, administered a dose of morphine to Mrs. Magdalena Hille by mistake for quinine, and caused her death. Dr. Philler had been out all night and was exhausted by want of sleep. He discovered the mistake, and hurriedly ordered his team, procured a stomach-pump and antidotes, and drove as fast as he could to the Hille residence. The time of his arrival was about fifty minutes after the morphine had been administered. He used the stomach-pump and applied his best art, but Mrs. Hille was beyond all help, and died soon after.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 15, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever
July 8, 1882.	2	9	46	6	37	41	2	0
July 15, 1882.	0	7	20	2	31	53	5	0

Erratum.—The article under caption "Hæmatemesis" in The Medical Record for July 8th, page 38, ninth line from top, for "relaxation" read "ulceration."

The Prize of the New Jersey State Society.—The subject for the essays to be offered in competition for the Fellows' Prize, for the coming year, is "The Importance of Exploration of the Urine, Chemical and Microscopic, as an Aid to Practice; and the Relation of *Albuminuria* to Diseased Processes." In a recent notice the word *hæmaturia* was used instead of albuminuria, by our correspondent.

Preserving Bodies by "Galvanoplasty."—At a recent meeting of the Physical Society, Berlin, Prof. Christiani exhibited as samples of a new method of preservation a series of organic bodies coated galvanoplastically. A mulberry leaf, a crab, a butterfly, a beetle, the brain of a rabbit, a rosebud, and other objects were plated with silver, gold, or copper, and showed all details of their outer form, down to the finest shadings. As to the process, it was stated that the objects to be preserved being put into a solution of silver nitrate in alcohol, then dried and treated with sulphuretted and phosphuretted hydrogen form good conductors, which, brought in the usual way into the galvanoplastic bath, can be coated with any desired thickness of a metallic deposit.

Artificial Quinia.—It is announced, in a recent number of the *Comptes Réndus* of the French Academy, that Mr. E. J. Maumené has succeeded in the synthesis of quinia by a simple and easy process, and that he has deposited with the Academy a sealed package, describing his process and containing a specimen of the artificial alkaloid. Therapeutic experiments with the artificial substance are still unfinished, but very soon the alleged discoverer will publish detailed statements and evidences of his results.—*Ephemeris of Materia Medica, etc.*

Mr. T. M. Balfour has been elected to the new Professorship of Morphology in the University of Cambridge. Mr. Balfour is a young man, having taken his degree through the Natural Sciences Tripos in 1873.

The Hypodermic Administration of Amyl Nitrite.—Mr. J. J. Frederic Barnes reports favorably (*British Medical Journal*) upon the use of amyl nitrite. He injects fifteen minims of a ten per cent. solution, equivalent to one minim of the pure drug. In cases where respiration is weak or suspended, it brings on immediate cardiac action. In acute lumbago a single injection relieves the pain like magic. In colic it also acts very well. The physiological effect is the same as when administered in the ordinary way.

Cutting down Insane Asylum Expenses.—The Governor has vetoed items in the appropriation bill for various asylums, distributed as follows: Auburn Insane Aylum, $8,000; Binghamton Insane Asylum, $20,000; Hudson River Asylum, $15,000; Buffalo Insane Asylum, $4,900; Homœopathic Asylum, $14,500; Utica Asylum, $15,029.38. This makes a total of $69,429.38 saved. The reasons given are that the sums appropriated were too large, or were for objects that should have been covered by the maintenance fund.

The Safest Anæsthetic Known.—Dr. Richardson says that methyline bichloride, ten fluid drachms, and absolute methylic alcohol, six fluid drachms, constitute the safest known anæsthetic when the methylic alcohol is absolutely pure.—*Lancet.*

The Committee on First Aid to the Injured has just issued its first report of operations. This report shows that 132 out of 190 students have received certificates entitling them to act as qualified assistants to the injured in any emergency. During the first season eighteen free classes have been established in this city among shop-girls, women living in tenement-houses, and among the members of working-men's clubs. It is in instructing the employees of factories, where the workers are exposed to danger by reason of contact with intricate machinery, that the committee have put forth most effort. Some effort was made to instruct railway employees at the Grand Central Depot, but the attempt was retarded greatly by the difficulty experienced in getting the men together for any specified time. No effort has yet been made in the direction of enlightening members of the police force in the matter of aiding the injured, but the committee report that the Police Superintendent has shown an interest in the work, and has favored a thirty days' course of instruction under the committee's supervision as an obligatory preparation for qualification for appointment on the police force. The committee announce that in the fall they will endeavor to have the course of special instruction introduced and followed in the Fire Department as well as among the police.

The report from which we condense the above presents its side of the case very fairly. It should be added that these societies have been organized of late in Berlin and other places in Germany. They go by the name of Good Samaritan Societies and have become fashionable and popular. They are considered, however, by some of the medical profession there as useless and a nuisance.

The California State Medical Society had an unusually successful meeting in April last. A number of reports on medical progress were read. The subjects of carrying out the medical registration law, of the necessity of an asylum for insane criminals, and of medical education were discussed. Professor Rudolph Virchow was elected honorary member. The following officers were elected for the ensuing year: *President*—L. C. Lane, San Francisco; *First Vice-President*—Ira E. Oatman; *Second Vice-President*—Wm. E. Taylor; *Third Vice-President*—E. A. Stockton; *Fourth Vice-President*—H. J. Crumpton; *Treasurer*—Ira E. Oatman, Sacramento; *Permanent Secretary*—Wallace A. Briggs, Sacramento.

THE OHIO STATE MEDICAL SOCIETY met June 13th, at Columbus, with President Dr. Starling Loving in the chair and Dr. J. F. Baldwin at the secretary's desk. Dr. H. G. Landis read a paper on the "Progress of Obstetrics and Gynecology;" Dr. R. A. Vance read a paper on the "Surgery of the Arteries," and Dr. D. N. Kinsman a paper on the "Etiology of Consumption." Each of the papers were in turn discussed by the members. In the evening Prof. Edward Orton, of the Ohio State University, delivered a lecture on the "Relation of the State to Public Health." The Society, at its conclusion, ordered the publication of one thousand extra copies.

Wednesday morning papers were read by Drs. N. P. Dandridge, P. S. Conner, and Sidney Norton. In the afternoon, amendments to the Constitution were adopted, without an anticipated wrangle. Papers were read by Drs. S. C. Ayres, W. H. Mussey, and Philip Zenner. The papers were all fully discussed. The election of officers for the ensuing year and the appointment of committees took place at two o'clock. Dr. C. P. Landon, of Westerville, was elected President, and Dr. George A. Collamore, of Toledo, Secretary. Dr. J. R. Black, of Newark, then delivered a lecture on "Preventable Diseases," after which the members were invited to an elegant collation spread for their benefit in the dining-hall. Papers sufficient to occupy the entire time of the Society for the succeeding day were announced

All in all, the meeting, says *The Cincinnati Lancet and Clinic*, was one of the most profitable in the history of the Society.

THE MISSOURI STATE MEDICAL ASSOCIATION held its annual meeting at Hannibal, May 16th, 17th, and 18th. Dr. Willis P. King, of Sedalia, President, in the chair. About one hundred members were present. No important business was done other than routine. Papers were read upon "Railroad Surgery," "Phlegmasia Alba Dolens," "Quacks," by Dr. King, of which two thousand copies were ordered to be printed.

Delegates from the Marion County Medical Association were at first refused admission, because one of the members consulted with homœopaths. The offending member then resigned, whereupon the delegates were admitted. Dr. C. H. Hughes read a paper on "Latent and Unrecognized Diseases of the Nervous System." The subjects of "Hydrophobia," "Laryngitis," and "Vaccination" were also brought up.

Dr. A. E. Gore, of Paris, was elected President for the ensuing year; Drs. C. A. Todd, of St. Louis, and J. H. Duncan, of Columbia, Recording Secretaries; Dr. William Dickinson, of St. Louis, Corresponding Secretary; Dr. C. A. Thompson, Treasurer.

SEMI-ANNUAL MEETING OF VERMONT STATE MEDICAL SOCIETY.—The semi-annual meeting of the Vermont State Medical Society, held in Burlington June 8th and 9th, attracted a large attendance of physicians from all parts of the State. At the first morning session Dr. Conland, of Brattleboro, read a paper on "Advancement of Medical Practice During the Past Year." In the afternoon, Dr. J. S. Richmond, of Woodstock, read a paper on "Ethics." Dr. Butler offered a resolution condemning the New York Code, which was adopted. A paper on "Urinary Analysis," by Dr. J. H. Linsley, was read. Dr. Linsley's paper was accompanied by numerous and instructive tests, with chemical apparatus, for the detection of the presence of sugar and albumen in diseased urine. Dr. Linsley's experiments were well received. An address was delivered by the Vice-President, C. W. B. Kidder. In the evening a social reception took place at the residence of Dr. L. M. Brigham.

On the second day, Prof. A. T. A. King read a paper on "The Ring of Bandel."

A "Report of Progress in Surgery" was read by Dr. John B. Wheeler, of Burlington. It was devoted particularly to an explanation of improved methods of performing operations and of treating wounds, and to remarks upon the modifications which the antiseptic treatment of wounds has undergone within the past few years.

Dr. F. G. Mills, of South Royalton, Dr. C. P. House, of Royalton, and Dr. L. McMillan, of Barnard, were elected to membership in the Association.

OPERATION FOR BILIARY FISTULA.—Dr. A. Von Winiwarter, Professor of Surgery in the University of Lüttich, Belgium, has recently operated for a biliary fistula in a case of impermeable ductus choledochus. The operation was successful and the patient is now in good health.

A NEW RUSSIAN MEDICAL SOCIETY has recently been organized, composed of the prominent medical men in St. Petersburg and Moscow. The object is to unite the profession more closely and secure its advancement.

THE UNVEILING OF A STATUE TO VON GRAEFE took place with much ceremony at Berlin, May 22d. Profs. Helmholtz, Donders, Virchow, Dubois Reymond, and others were present. Profs. Langenbeck and Artl made appropriate speeches. The statue is said to be a very handsome one.

THE THERAPEUTIC USE OF MIRACLES.—M. Féréol (*Journal de Médicine de Paris*) relates the case of a young girl affected with an incessant hysterical cough which was very distressing, and obstinately resisted all remedies. One day he noticed in her room a bottle of water from the famous holy well in the Pyrenees, and it occurred to him that this was a case in which a cure might be obtained. In an interview with the girl's mother he explained his views, she acceded to them, the pilgrimage was taken and a cure resulted. M. Féréol remarked with reference to this, that the supernatural does not exist, all that is is natural; there are, doubtless, many things we do not understand, and we cannot deny that so-called miraculous cures take place under the powerful modifying influences of moral or mental impressions. He thought it better to recognize these facts and keep a control over our patients than to ignore them, with the result that the same means are used without us.

A GREAT PRIZE.—The Royal Academy of Medicine of Belgium offers the tempting sum of 8,000 francs for a sufficiently worthy essay elucidating by clinical facts, and if need be by experiments, the pathogenesis and therapeutics of diseases of the nervous system, and especially of epilepsy. The essays must be handed in by December 31, 1883. A sum of from 300 to 1,000 francs will be given to any author whose essay, while not meriting the prize, deserves some recompense.

The sum of 25,000 francs will be given to any one who makes any epochal progress in the therapeutics of diseases of the nervous system, such as a discovery of a remedy for epilepsy.

Original Communications.

THE MECHANICAL EFFECT OF NERVE-STRETCHING UPON THE SPINAL CORD.[1]

By C. L. DANA, A.M., M.D.,

PHYSICIAN TO CLASS OF NERVOUS DISEASES, NORTHEASTERN DISPENSARY; MEMBER OF THE AMERICAN NEUROLOGICAL ASSOCIATION, ETC.

The spinal cord hangs rather loosely in its canal. It changes its position in the different movements of the trunk. The question in nerve-stretching, therefore, is essentially not whether the cord moves, but whether it is stretched.

The spinal cord is quite firmly connected with the dura mater. This is fastened to the borders of the foramen magnum; below it extends over the nerve-root into the intervertebral canals, and is continuous with the nerve-sheaths.

In pulling on the sciatic nerve the traction comes on the cord and dura together, but chiefly on the latter. This I have demonstrated to my own satisfaction, at least, in the following way. I exposed the sacral, lumbar, and part of the dorsal canal. I then cut through the dura for a short distance transversely before and behind. I finally cut the cord entirely across, leaving two lateral bands of the dura untouched. By pulling on the sciatic both cord and dura above the section were moved. By very forcible pulling I drew one of the branches of the cauda equina, with its investing membrane, entirely through the intervertebral canal. It is a fair inference from this and other facts that the idea, put forth by some, that by opening the nerve-sheath and pulling on the nerve alone we can move the cord and not its membranes, is quite erroneous.

The factors which prevent the traction on a nerve from moving the cord are these: 1st. The union of the nerve to its sheath and of that to the surrounding soft tissues. 2d. The union of the sheath to the wall of the intervertebral canal. Here the nerve makes an angle also, and force is thus lost. The union in the canal may be very firm; and it is here that the strongest opposition is found. 3d. The extensile character of the nerve itself.

Once the force has reached the spinal canal, its influence must be to stretch the cord; for this organ and its membranes are yielding and elastic,[2] and, as has been said, are fastened quite firmly at the top.

As to whether the cord is stretched when the sciatic, crural, or brachial nerves are pulled upon, the evidence is of two kinds: 1st, anatomical, and, 2d, clinical. Regarding the first I find the following:

1. Harless & Huber,[3] also Conrad,[4] are cited by Chauvel as stating that the cord is not moved by pulling on the nerves. I could not get access to the original papers of these gentlemen, and must let their evidence go.

2. Vogt[1] states that the cord is not moved. He performed experiments upon two subjects. In the first he pulled upon the sciatic and failed to move the cord, but he did not open the dura. This I believe to be of no importance. In the second case he stretched the brachial plexus, also with no result.

3. The Brothers Fieber[2] saw the cord move upon very forcibly flexing the thigh, the knee being extended. They had previously exposed the sciatic nerve.

4. Gillette[3] asserts that on powerfully stretching the sciatic he felt the medulla move. This experiment was not very carefully conducted, however.

5. Höslin & Lohlein are cited by Braun[4] as seeing the dura move on stretching the sciatic. On opening the dura, however, they could not see the cord move.

6. J. Symington[5] states that in traction on the sciatic the cord is not moved, but that the dura mater is. All the force is, he thinks, expended upon the dura. He refers in a general way only to his dissections and experiments, and his assertions are weakened on this account.

7. Gussenbauer[6] saw the cord move upon stretching the sciatic. In the lumbar region the amount of movement was from two to three millimetres. He split open the dura first. He also saw the medulla move.

8. By far the most careful experiments have been made by Dr. J. Braun.[7] This observer used an instrument for measuring the amount of movement. He laid open the spinal canal to the foramen magnum, and split open the dura. He also measured the amount of traction used. He found that the cord moved different amounts at different heights; thus:

At the lumbar region—				
With	1 lb.	pull it moved	0.04	millimetres.
"	10 lb.	" "	0.66	"
"	30 lb.	" "	0.83	"
"	60 lb.	" "	2.00	"
At tenth dorsal—				
With	1 lb.	pull it moved	0.04	"
"	60 lb.	" "	1.75	"
At eighth dorsal—				
With	1 lb.	pull it moved	0.04	"
"	60 lb.	" "	1.17	"
At fifth dorsal—				
With	1 lb.	pull it moved	0.33	"
"	60 lb.	" "	0.05	"
At first dorsal—				
With	1 lb.	pull it moved	0.16	"
"	60 lb.	" "	0.33	"

He could not measure the movement in the cervical region, but he states that it could be traced up to the foramen magnum, and he is confident that the medulla must have been moved. It will be seen that, according to this observer, while the cord moves about $\frac{1}{12}$ inch in the lumbar region, it moves but $\frac{1}{25}$ inch at the first dorsal. The cord is, therefore, stretched.

It should be added that he got the foregoing results upon two cadavers. Upon a *third* with which he experimented *no movement could be seen.*

---

[1] Read at the annual meeting of the American Neurological Association, June 21, 22, 23, 1882.

[2] I measured the elasticity of the cord in the following way: I took the lower fragment of the spinal cord of a cat, stripped it of the dura mater, and suspended it against a wall. The part suspended and stretched measured two inches and three-eighths. The transverse measurement was one-fourth of an inch in most of the extent. By pulling on the lower end the fragment was extended five thirty-seconds of an inch. On removing traction it returned to the normal length. On traction of more than five thirty-seconds of an inch it failed to return, and was evidently somewhat torn.

I should estimate that the spinal cord as a whole could be stretched about one-twelfth to one-fifteenth of its length, or somewhat over an inch.

[3] Zitschrift f. rat. Medicin, 1859, S. 446, 447.

[4] Exper. Untersuch. Greifswald, 1876.

[1] Vogt: Centralbl. f. Chirurg., 1876.

[2] Wiener med. Presse, No. vii., 1882.

[3] Progr. Med., February 5, 1881.

[4] Prag. Med., Wochen., Nos. 17, 18, 19, 1882.

[5] Brit. Med. Journ., p. 770, May 27, 1882.

[6] Prag. Med., Wochen., Nos. 1, 2, 3, 1882.

[7] Loc. cit.

9. I have experimented—

(*a*) Upon a twelve pound dog.[1] The cord was exposed and over fifty pounds traction made upon the sciatics. No movement could be detected. The dura was slit, and lastly the whole cord was cut across, but still with no result.

(*b*) Upon a human cadaver.[1] The subject was a man weighing over one hundred and eighty pounds, dead about two days. The skull-cap and brain were removed and the medulla exposed. Traction of over one hundred and fifty pounds was made upon the left sciatic, but the medulla did not move. The nerve was finally broken in pulling. The right sciatic was tried with the same result. Dr. Wm. H. Porter was present and confirmed the opinion that no motion took place.

(*c*) The medulla and sciatic nerve of a dromedary weighing about four hundred pounds were exposed. Traction of over fifty pounds failed to move the medulla.

(*d*) The human cadaver of a man weighing about one hundred and forty pounds was taken, the skull-cap and brain removed; the spinal cord exposed from the second dorsal to the third lumbar vertebra. The subject was placed on the edge of the table, face down. The left extremity was then forcibly flexed upon the trunk, the leg being kept extended. When the extremity passed a right angle with the body, the cord and then the medulla were seen to move. Motion in the medulla did not take place until the limit of flexion was nearly reached. Its movement was very slight, indeed. Great care was taken to exclude error. Dr. Wm. J. Morton, who kindly assisted me in this and the following experiment, agreed that there was a perceptible motion.

The movement of the spinal cord was very marked. It was measured as follows: A small stiff wire, eleven inches long, was flattened at one end and this flat end thrust into the cord. It was rested against a transverse piece of metal two-thirds of an inch above the surface of the cord and fixed in the bony tissue on each side. A movement of the short arm would be magnified not quite fifteen times by the long arm. There was a device for registering the movement of the long arm. It was found that at the level of the first lumbar there was a movement of the cord downward of about $\frac{1}{12}$ in. (1.9 mm.). The cord was also pulled forward. At the level of the sixth dorsal a movement of $\frac{1}{16}$ in. (1.2 mm.).

The sciatic nerve was then exposed and traction applied. A scale balance was used. It was found that a pull of twenty pounds moved the cord perceptibly. A pull of about fifty pounds caused a slight, barely perceptible, movement of the medulla.

The movement of cord on pulling the sciatic was slightly (about one-fourth) less than that obtained by subcutaneous stretching. Comparative experiments were repeatedly made. The exact amount of movement was not recorded. The dura mater was not opened in this experiment; but the substance of the medulla was seen to move, which proved that the whole cord did the same.

(*e*) A second human cadaver of a slightly heavier man was used. The cranial cavity was not opened. The spinal cord was exposed as in the previous case. Flexion of the extremity, as before, caused very marked movement of the cord. This movement, at a level with the eighth dorsal, amounts to $\frac{1}{8}$ in. (3 mm.). Movement higher up was perceptibly less. The sciatic was then exposed and traction made. A pull of one pound caused a movement of the cord. A pull of thirty pounds moved the cord $\frac{1}{10}$ in. (2.5 mm.) at the level of the eighth dorsal vertebra. Comparative experiments showed that here also more movement could be obtained by subcutaneous stretching than by direct traction upon the sciatic. The measurements given were with the dura mater uncut. When it was cut and the stretchings repeated the cord itself was seen to move as the dura had done, though not quite so much. From our experiments it appeared that the traction came most upon the dura mater. This in the lumbar region is pulled down and even thrown into longitudinal folds. We did not in any case open the nerve-sheath of the sciatic.

With regard to the amount of force expended in subcutaneous stretching, I found that by catching the hook of the spring scales into the sciatic within the pelvis, then bracing the large dial surface upon the os innominatum and flexing the leg to a right angle, a force of twenty-five pounds was required to raise the nerve from its bed. When the limb was extended, a pound would raise it easily.

(*f*) I exposed the dorsal part of the cord of a cat. A traction of ten pounds caused something apparently to give way. The cord and dura then moved very perceptibly upon traction of even half a pound.

From the above it will be seen that the experimental evidence as regards stretching the spinal cord, so far as I can find, is as follows:

Cord or Medulla does not Move.	*No. Cases.*	*Cord or Medulla Moves.*	*No. Cases.*
Harless and Huber	?	Bros. Fieber (subcutan. stretching)	1
Valentin and Conrad	?	Gillette (medulla moved)	1
Braun	1	Gussenbauer (saw cord and medulla move)	2
Vogt	1	Braun (saw cord move)	2
Dana (medulla did not move, nor cord in one lower animal)	1	Dana	2
Symington (saw dura move only)	1	" also in lower animal (cat)	1
Hoslin and Lohlim (saw dura move only)	1		

The above figures appear to indicate more than they really should. In all the carefully detailed experiments on the human cadaver, except one of Vogt's and one of Braun's, the cord was seen to move. In one case of mine the medulla did not move.

The *clinical evidence* that stretching the sciatic nerve stretches the spinal cord is confined chiefly to the cases in which the cutting operation is done. I cannot pretend to have collected all, or even much of it. Nor am I sure that all the cases cited are to the point. In the great majority of cases of nerve-stretching no clinical evidence of any mechanical violence to the cord is recorded.

1. Kulenkampff[1] relates a case of tabes, with stretching of the sciatic, a force of eighty to one hundred pounds being used. The patient developed a cystitis at once, and soon died.

2. Gussenbauer[2] relates a case of tabes, with nerve-stretching. Shortly after the operation there were some disturbances of the heart's action, of breathing, and of the pupil. There was, first, a slight improvement, then pyelonephritis and death. On post-mortem two submeningeal hemorrhages were found, 1.5 ctm. long, near the second and third dorsal vertebra. There were also recent inflammatory adhesions between pia and dura.

[1] These experiments have been already reported in THE MEDICAL RECORD, March 4, 1882, p. 243.

[1] Berlin Klinisch. Wochen., No. 48, 1881.

[2] Prog. Med. Woch., March 15, 1882.

3. Westphal[1] relates a case of spastic spinal paralysis, for which nerve-stretching was performed. The result was a flaccid paralysis, then death. Post-mortem showed a focus of softening in the lumbar region, on the side of the stretched nerve. Westphal attributed it to the operation.

4. Westphal[1] also relates a case of stretching the brachial plexus, followed by a meningitis. But Lallemand has shown, by citing a counter case, that this may have been due to the injury to the nerve itself.

5. Israel[1] stretched the sciatics in a case of spastic spinal paralysis. A flaccid paralysis followed, involving muscles of the thigh not supplied by the nerves stretched.

6. Langenbeck's case of supposed tabes is well known. The patient died, it was thought, from chloroform narcosis. It might be queried whether the nerve-stretching was not a factor in the question. It might be added here that Langenbeck's method of stretching the sciatic is to pull upon it until some change is noted in the pupil, heart, or respiration.

7. M. Benedict reports a case of sciatic nerve-stretching. It was followed by severe vomiting, singultus, and paralysis of the bladder.

In connection with the above cases, some of which can be variously interpreted, the fact should be remembered that in the vast majority of instances the symptoms following nerve-stretching are those of interference with the functions of nerve-trunks, and that the efficacy of nerve-stretching has been almost entirely confined to peripheral diseases.

The foregoing refer to the effects following the cutting operation. In *subcutaneous nerve-stretching*, the evidence that any central stretching is produced in the living body is very slight.

1. Gussenbauer[1] had a female patient, aged twenty-three, who had suffered from polyarthritic rheumatism since childhood. There was no heart disease. The knees and hips were flexed and fixed. The ankyloses were forcibly broken up under chloroform. Nine hours later the patient suddenly died.

2. A similar case, also cited by Braun, occurred in Billroth's clinic.

3. Professor Pribram, of Prague, related to Braun[2] the case of a young man with long-standing rheumatic contractures of hips and knees. He was operated upon. Next day he suddenly died, without apparent cause. Post-mortem showed numerous small hemorrhages along both sciatics, in the intervertebral canals, and upon the dura and pia as far as the cervical cord. These hemorrhages were all fresh.

This case is, I think, unique. I have tried to find whether any similar one has occurred in this city. Drs. H. B. Sands, L. H. Sayre, R. F. Weir, G. F. Shrady, H. M. Shaffer, V. P. Gibney, and T. E. Satterthwaite, of whom I have made inquiries, have all informed me that they had had no such experience, nor can I find any in the books.

4. I etherized an epileptic and stretched the sciatics as powerfully as I dared, Dr. G. M. Hammond kindly assisting me. For two weeks subsequently the patient complained of constant tinnitus and dizziness. He was given hydrobromic acid, which relieved him. In the two weeks he had had but one fit. He had previously had one or two every day.

[1] See Report of Debates on Nerve-Stretching, before Berlin Medical Society. Centralbl. f. Chirurg. 17. Jan. 28, and Centralbl. f. Nerolk. Psych. 15 Feb., 1882.

[2] Case cited by Braun, *vide* loc. cit.

From a study of the foregoing facts relative to the mechanical effect of nerve-stretching upon the cord, I come to the following conclusions:

(A) As regards the cutting operation:

1. Traction upon the sciatic nerve of the cadaver in the majority of cases, but not in all, stretches the spinal cord.

2. This stretching is greatest at the lower part, amounting to 2 to 3 mm., with a very powerful pull (50 to 80 lbs.).

3. The movement is distributed over the yielding cord, and only in a *minority of cases* does it reach the medulla. The medulla then moves very slightly, less than 0.3 mm.

4. When the cord is not moved it is due probably to the unusually tight adhesions of the sheath to the nerve, and of that to the surrounding tissue, especially in the intervertebral canal.

5. Traction upon the nerve and sheath if it reaches the spinal canal acts chiefly upon the dura. That is, the cord is stretched partly by direct force, but chiefly by the movement of the enveloping membrane.

(B) As regards subcutaneous nerve-stretching:

1. On the cadaver this is a powerful means of moving the cord.

2. In the living subject it is as yet doubtful if subcutaneous nerve-stretching affects the cord mechanically at all. The clinical evidence is very meagre; anatomical evidence cannot be obtained.[1]

Finally, I would say that I have confined myself to studying the grosser mechanical effects of nerve-stretching. It is, of course, very possible that even when traction does not directly and grossly affect the cord there may yet be central effects produced, reflexly or otherwise.

[1] Vogt, according to Gray, claims to have demonstrated that the most extreme normal movements of the body cannot abnormally stretch normal nerves.—*Journal of Neurology and Psychiatry*, *May*, 1882, p. 216.

THE CITY CHARITABLE INSTITUTIONS.—A census of our city charitable hospitals for the past year shows the following number of patients:

Bellevue Hospital, 680; Charity Hospital, 970; Incurable Hospital, 104; Homœopathic Hospital, 617; Hart's Island Hospital, 247; Randall's Island Hospital, 742; Almshouse Hospital, 120; Maternity Hospital, 48; Infants' Hospital, 200; Workhouse Hospital, 56; Emergency Hospital, 4; Colored Home and Hospital, 50; Emigrant Hospital, 1,200; Riverside Hospital, 70. Total in city hospitals, 5,108.

The private hospitals have a capacity about as follows: New York Hospital, 150; Chambers Street Hospital, 26; St. Luke's Hospital, 170; St. Vincent's Hospital, 150; St. Francis' Hospital, 200; St. Joseph's, Hospital, 25; German Hospital, 125; Mount Sinai Hospital, 160; Roosevelt Hospital, 180; Presbyterian Hospital, 100; Women's Hospital, 120; Hospital for Ruptured and Crippled, 200; Nursery and Child's Hospital, 200; St. Mary's Free Hospital for Children, 70; St. Elizabeth's Hospital, 65; Trinity Infirmary, 34; New York Eye and Ear Infirmary, 20; New York Ophthalmic and Aural Institute, 30; Manhattan Eye and Ear Hospital, 30; New York Infirmary for Women and Children, 80; Metropolitan Throat Hospital, 25; Harlem Hospital (?); French Hospital, 22; Hahnemann Hospital, 70; Bedloe's Island Hospital, 100. Total capacity of private hospitals, 2,302. Total of all hospitals, 7,410. Lunatic Asylum, Blackwell's Island, 1,389; Insane Asylum, Ward's Island, 1,260; Branch Asylum, Hart's Island, 362. Total, 3,021.

CASES OF INTESTINAL OBSTRUCTION,[1]

With Remarks on Diagnosis and Treatment.

By CHARLES K. BRIDDON, M.D.,[2]
SURGEON TO COLORED HOME AND HOSPITAL, NEW YORK.

ACUTE INTESTINAL OBSTRUCTION—LAPAROTOMY—DEATH.

Thomas H. S——, aged thirty-five, New York, married, laborer; admitted November 30, 1881, 7 P.M., with following history: This A.M. about 8 o'clock was taken with severe pain in the hypogastrium and with a desire to micturate, but on endeavoring to do so found it impossible. Remained in this condition until just prior to admission, when he sought aid of a neighboring physician, who endeavored, without success, to pass a number of catheters, and sent him to this institution for further treatment. Appropriate means were used to overcome the stricture without avail, and at 10 P.M. aspiration of the bladder above the symphysis pubis was performed, and f ʒ xxi. of urine removed. It was amber in color, cloudy, acid, sp. gr. 1022, and free from albumen or sugar. He was fairly nourished; appetite poor; bowels constipated; tongue clean; pulse, 96; respiration, 32; temperature, 99°. Heart and lungs healthy. During the night he was kept free from pain by liquor morphiæ (U. S. P.) and had an unconscious evacuation of the bladder toward morning. The two following days (December 1st and 2d) he complained of hypogastric pain and dribbling of urine, but there was not any marked distention of the bladder. On the 3d he passed urine twice in small quantity, mixed with stringy mucus. Bowels not having moved, was given magnesiæ sulph., and passed a few scybalous masses. The next evening (4th), no urine having been passed during the day and the bladder being markedly distended, aspiration was again performed in same situation. During the operation, when about f ʒ viii. of blood-stained urine had been withdrawn, the instrument became clogged with mucus and clotted blood, and rendered further removal impossible. The urine was passed in small amounts the two following days (5th and 6th), but on the evening of the 7th the bladder was again found greatly distended and aspiration was necessary for the third time, f ʒ xxii. of clear urine being removed. On the following morning (8th), succeeded in passing No. 4 soft rubber catheter into the bladder and left it *in situ* for six hours, after which was able to introduce the soft French bougies up to No. 17. Patient afterward continued to pass the urine naturally. He now began to complain of attacks of hiccough and vomiting at intervals, and of abdominal pain, which persisted in spite of treatment until the 11th, when the abdomen became slightly tympanitic. The vomiting now became incessant, consisting of food and bile-stained mucus, and on the 12th instant, the abdomen was found to be slightly tender on pressure, markedly distended, and on percussion tympanitic all over. Pulse, 78; respiration, 26; temperature, 99°. These symptoms, with the fact that there had not been a normal evacuation of the bowels, suggested an obstruction of the gut. Was given spirits terebenthinæ, ℥ xx., and enema of same in the afternoon, and during the night passed a small amount of hardened fæces. December 13th, same symptoms continued. Breathing was chiefly thoracic on account of the immobility of the abdominal walls. By digital exploration of rectum a resilient mass, feeling like partially distended gut, could be felt behind and to the left of the bladder and apparently attached to the pelvic wall. Pressure on this was very painful and caused a desire to defecate. Dr. Briddon saw patient at 4.30 P.M., and ordered him put under the influence of ether, and the bowels to be filled with water through a funnel, patient being inverted. Endeavored to do so, but was able to get in only about four pints, when it regurgitated. About 1 A.M. (14th) passed about a quart of water and half a teacupful of small fecal masses. Did not vomit through the night and the tympanites was not so great; pulse, 80; respiration, 28; temperature, 100°. At 2.30 P.M., at a consultation of the surgeons, laparotomy was deemed advisable. Dr. Briddon operating, patient being anæsthetized and with a reliable carbolic acid spray playing over the abdomen, an incision was made between the two recti from immediately below the umbilicus to within an inch of the pubis. The consecutive layers were divided until the peritoneum was exposed, and this was incised upward and downward upon a director; there was no escape of the products of inflammation, and fortunately very little annoyance from intestinal protrusion. On introducing the finger into the cavity, it at once encountered what was supposed to be the cause of trouble, a loop of small intestine adherent to the abdominal wall in the region of Hesselbach's triangle; with some little difficulty a finger was hooked around the loop at the point where it was adherent. To facilitate the separation it was deemed advisable to carry the incision in the abdominal wall as far as possible downward, and in doing this a cavity was opened which discharged a few ounces of fetid pus; means were at once used to prevent any escape of this into the abdominal cavity, the pus cleaned out by the introduction of sponges wrung out of a solution of carbolic acid, and its interior thoroughly explored. It was situate just above the fundus of the bladder, immediately behind the body of the pubis. The cavity was filled temporarily with sponge, and the operation proceeded with. The loop of intestine, which was adherent by a surface, the area of which was about an inch and a quarter in diameter, was gradually and carefully separated, the adhesions were firm and certainly did not look like recent formations. When freed from its attachment, the parts in the immediate neighborhood were again explored and the real cause of obstruction was then brought to view. A second loop was found situate immediately below the first, and adherent by an area of about the same size, to the posterior aspect of the body of the pubis. This loop was much more highly vascularized than the first, its color being violaceous or maroon. Its connections broke down more easily than those that bound the first loop to the abdominal wall, and there was considerable venous oozing from the surface detached. After cleaning the pelvic cavity, a drainage-tube was passed into the abscess, and the first and lowest silver suture was so arranged as to cut off entirely and securely all communication between that cavity and the peritoneum. The remainder of the wound was closed with a dozen silver sutures, with intermediate superficial ones of silk. The line of incision was covered with a strip of lint saturated with carbolized oil, and the whole abdomen with a thick layer of cotton and bandage. It was found

[1] Read before the New York Surgical Society, May 23, 1882.
[2] History by Dr. Thomas W. Bickerton, Resident Physician.

impossible to determine correctly the precise relationship of these two adherent loops, but as there was a marked difference in the appearance of the two, the deeper one being much more highly congested, it is more than probable—indeed it was regarded as demonstrated—that its lumen was occluded by the loop that lay above it. After operation patient was given brandy, ʒ iv. hypodermically, and returned to bed with hot bottles to the extremities. December 15th, 9 A.M.: Patient passed a fair night. comparatively free from pain, sol.morph.U.S. P., ʒ i., being given every two hours, but complained of feeling very weak. Pulse, 116; respiration, 24; temperature, 101°. Ordered beef-tea and milk-punch every half hour, alternately. 11.30 A.M.: Called and found patient failing—cold extremities, and feeble, rapid pulse. Hot bottles were applied, and was given brandy hypodermically. 2.15 P.M.: Patient died.

Necropsy, twenty-six hours post mortem. Rigor mortis strongly marked. Body emaciated, not to marked extent. Abdomen quite distended, and in median line extending from near the umbilicus to symphisis pubis an incision held together by alternate silver and silk sutures, at the lower part of which a drainage-tube emerged. The wound showed partial primary union to have taken place throughout. *Thoracic cavity.*—Heart healthy. Lungs: right, few adhesions of pleura, emphysematous at apex to slight extent, congested posteriorly; left, markedly adherent to parietes, markedly emphysematous at apex and congested posteriorly. *Abdominal cavity.*—Liver healthy; spleen healthy. Kidneys: right, enlarged, on section pale, cortex quite thin and striæ not marked, capsule stripped off; left, same changes as in right, but not so marked. Bladder dilated, walls thinned, and cavity filled with urine. Intestines: small, marked venous congestion, distended with gas and a small amount of diffluent fæces; eighteen inches from ileo-cæcal valve was found the remains of one adhesion which was broken down at time of operation. It was highly congested and showed that the peritoneum had been denuded from the gut over a space the size of a five-cent piece. About two inches nearer the termination of the ileum was found the remains of the other adhesion released by the operation. It was not congested nor was there any laceration of the peritoneum. There was also discovered one other adhesion still existing between the intestinal coils, but not so as to produce any occlusion. The large intestine was not congested, but was greatly distended with gas from the caput coli as far as the splenic flexure; at this point the omentum was slightly adherent to the gut, but there was no evidence of recent peritonitis. Beyond this point the large intestine was in a collapsed condition. From the pale condition of the gut it was evident that there had been no involvement of it in the obstruction, but that the gas had probably passed into it from the small intestine after the liberation of the latter by the operation. The sharp angle at the splenic knuckle prevented the gas from passing freely onward, though it could be *milked* through—hence the collapse of this portion. Between the body of the pubis and the fundus of the bladder was found the abscess opened in making the abdominal incision, and into which was passed the drainage-tube. It was about the size of a pigeon's egg and contained a small quantity of offensive pus. The connective tissue beyond the abscess presented a healthy appearance.

Remarks.—The sequence of events stand out with sufficient prominence to be easily understood. Aspiration with a faulty needle had permitted the escape of urine into the connective tissue in the neighborhood of the bladder, this had caused abscess, a local peritonitis and adhesion of the nearest loops of intestine, the loop first found had formed a bridge or arcade, under which the deeper loop became engaged, and was probably strangulated by the tense mesenterial band of the first.

In THE MEDICAL RECORD of 1879, a case of intestinal obstruction of eight days' duration was published by Dr. G. W. Hunt, of Cornish Flat, N. H., in which I performed the operation of lumbar colotomy. The case was subacute in character, the obstruction low down, and the issue was successful.

In THE MEDICAL RECORD, May 15, 1880, I reported a case of acute intestinal obstruction of six days' duration that occurred in the practice of the Presbyterian Hospital, laparotomy was done, a portion of the ileum was found strangulated in a subperitoneal hernial sac, the orifice of which was situate close by the internal ring. The patient died.

These cases which came under my immediate supervision, and others of a kindred character, that I have seen in the practice of my friends have impressed me with the conviction that the embarrassment which we feel in the presence of such cases is largely due to our lack of familiarity with the very various pathological conditions that we may have to deal with. The literature of the subject is comprehensive enough, and I have thought that it would repay the labor of an attempt to condense into a small space those points that might enable us to differentiate between the various forms of obstruction and their seat.

Age is an important element in the diagnosis. In early life invaginations are a common cause, fifty per cent. occurring during the first ten years, twenty-five per cent. during the first year. The symptoms are plain enough, and yet they are not infrequently mistaken for dysentery, entero-colitis, and peritonitis, the ileo-cæcal is the most common and its extent will vary of course with the extent to which the entering layer is projected into the receiving layer; the anatomical cause for its frequency will be found in the greater mobility of those portions of the gut in early life. The symptoms appear suddenly with violent colic, vomiting, and evacuations of bloody mucus from diapedesis and rupture of blood-vessels caused by compression of veins of the invaginated mesentery, these discharges occur in no other obstruction save that caused by twisting of the sigmoid flexure. Meteorism may be marked in the invasion and may subside with the advent of the bloody stools referred to. The most important symptom is the presence of a tumor formed by the invaginated intestine, it may be felt through the abdominal walls at varying points along the course of the colon, and its formation and extension is so rapid that in some cases it can be felt in the rectum on the second day. In old age the diagnosis will generally rest between impaction of intestinal contents and cancer. The records contain numerous examples of the former in which habitual accumulation of fæces in the rectum and sigmoid flexure of old people have led to permanent arrest of peristalsis, to paralysis, and hyperextension. Such conditions are usually preceded by coprostasis, which may be due to chronic catarrh, the use of too little fluid, or too much vegetable food. A careful examination by manipulation through the abdominal walls and with the fin-

ger in the rectum will suffice to determine the existence of impaction.

Malignant disease may show itself in the localized annular form, in which the impaction of undigested food may produce prompt occlusion, or it may occur in the form of diffuse cancerous infiltration; these conditions will occur in persons in whom there is evidence of disturbance of general nutrition, emaciation, change in the color of the skin, recurring symptoms of obstruction, attacks of partially interrupted permeability, to which may be added the grave phenomenon of total definitive occlusion, the milder attacks increasing in frequency with the advance of time and yielding less readily to the means used for their relief. Sometimes we may be able to discover a tumor, and it may be difficult to decide whether it be neoplasm or fæces. If it neither changes its shape or position, it is probably the former, but it may be distended and hypertrophied intestine above a constriction. In such cases, if it diminish in size, or disappear when the temporary obstruction has passed through, then it may be possible under ether to discover the permanent cause.

Between the two extremes of life we shall meet with all those various occlusions that have done so much to baffle the best-directed efforts of the diagnostician, or it would probably be more correct to say that whilst the causes we have referred to belong almost exclusively to the extremes, those to which I shall only briefly refer may occur at any period. Internal strangulations of the intestine by peritoneal false ligaments, bands passing from one loop to another, from a loop to its mesentery or the abdominal wall, through buttonholes in false ligaments, in the mesentery or omentum, any of these may be suspected where there is a history of a previous peritonitis. Strangulations by diverticles occur between the ages of twenty and thirty. Strangulation of internal hernia in pouches of the peritoneum are too numerous in their varieties and character to permit of description in an article like this, and we can only refer to cases of knotting and twisting as such that are usually hyperacute in character, correspondingly rapid in the development of symptoms, and most fatal in results.

I will now pass on to the consideration of those symptoms that may enable us to form an opinion as to the seat of obstruction. A previous history of peritonitis, especially such as is limited to the pelvic region in the female, may warrant a suspicion either as to character or location.

Feelings of abdominal discomfort, fixed or recurring pain in the same spot may lead to physical explorations through the abdominal walls, in the neighborhood of the different outlets, or by Simon's method, that may determine the location with some approach to precision. Enemas have been used for the same purpose of determining the capacity of that portion of the intestine that lies below the obstruction. From experiments made on the cadaver, Brinton concluded that if 500 c.ctms. of liquid could be injected, the obstruction could not be lower than the upper end of the rectum; if 1,500 c.ctms., it could not be lower than the upper end of the sigmoid flexure. In a case of occlusion of the ascending colon, four and one-half litres were injected. Cadge did a colotomy where a sound only passed six inches, and only a few ounces of water could be injected, and in which the obstruction was found in the ileum. Great differences are met with as regards the toleration of enemas, and those who have had most experience with them as means of diagnosis, have rejected them as unreliable.

The first symptom that naturally attracts attention is constipation, which is present in the very large majority of cases, but as stated when speaking of invaginations, there may be discharges of blood and mucus; the same may occur in twisting of the sigmoid flexure and in incomplete obstructions; the possibility of copious diarrhœa is not to be denied when the obstruction is high up in the jejunum or duodenum, and has been ascribed to the extension of the peristaltic movements to the portion lying below the occluded point. Brinton attributed such discharges to transudation, but experiments by German observers have proved that they were the result of increased peristalsis. Of course the intestine below the obstruction is emptied of fecal matter in all cases in the beginning of the attack, and save in the exceptions referred to constipation is the rule.

Pain often follows the occurrence of obstruction with a rapidity and suddenness which scarcely admits of the appreciation of an interval of time, its amount and duration being commensurate with the degree of local injury that is associated with the obstructed state; it is intense in intussusception and the impaction of gall-stones, less so in constrictions by bands, still less in the obstruction of stricture, and almost absent in the cases of impaction of fæces in the large intestine; there is a steady, constant, and continuous pain, aggravated by paroxysms that appear to be coincident with the peristalsis of the bowel; often they begin as light, colicky pains, rapidly increasing, sometimes spreading over the whole abdomen, sometimes circumscribed, and limited to the region of the umbilicus.

Vomiting will usually be relative with three conditions, and proportionate to them, the nearness of the obstruction to the stomach, its tightness, and the persistence with which food and medicine have been administered. If the obstruction is situate in the upper portion of the small intestine, below the orifice of the common duct, the ejecta will be colored with bile; when it is situate in the ileum they begin to assume a fecal character; when in the colon stercoraceous vomiting occurs, the fæces are finely disseminated through the fluid by the movements imparted to it by the peristalsis. Of course it is understood that the contents of the colon can only pass into the ileum when the ileo-cæcal valve has become insufficient by distention and simultaneous paralysis of the cæcal sphincter. Stercoraceous vomiting occasionally occurs in cases of diffuse peritonitis without demonstrable obstruction, but this condition will be differentiated by the presence of other symptoms of serous inflammation, the tenderness on pressure, increasing distention, projection of borders of ribs and hypochondria, disappearance of region of dulness over the liver, elevation of temperature, intensified collapse, and increased frequency of pulse.

The amount of urine passed has been regarded by some observers as a guide to the location of the obstruction. It has been supposed that when it occurred high up in the intestinal canal, there would be a diminution in the quantity secreted corresponding to the small absorbing surface above the obstruction, this may undoubtedly exercise some influence, but it is more probable that the anuria arises from the withdrawal of water from the system by the vomiting, and by the diminished blood tension in the vascular system of the kidney, resulting from shock. At all events, the observation of acute cases

has shown the condition to be a fallaceous guide in determining location, it is useful for such a purpose only in the chronic incomplete occlusions.

By making frequent examinations in the beginning of the attack we may often learn much that may throw important light on both the character and situation of the stenosis. In chronic obstructions there may be marked meteorism, and the writhing convolutions can be seen through the abdominal walls, while in acute cases the meteoristic abdomen is distended smoothly and equally, and no movements are visible. In occlusions occupying the upper portion of the small intestine the meteorism is not marked, and is limited to the epigastrium; in those occurring in the lower part of the small intestine, the swelling is noteworthy, and limited mainly to the meso- and hypo-gastrium, obstructions in the descending colon are marked by meteorismus confined to the region of the large gut. These indications can only be found early, the rapidly increasing distention of either small or large intestine, soon obliterates all evidences of the condition we are considering.

The few remarks I have made on the subject of diagnosis are by no means to be regarded as exhaustive, rather as suggestive, and simply to express my conviction, that a correct or approximately correct appreciation of the character and location of an obstruction is possible in many cases, and ought to precede any treatment that we may consider appropriate, and likely to be successful. The subject is a very comprehensive one, and those who would wish to study it more in detail, I refer to the sources from which I have obtained much that is contained in this communication.[1]

If we approach a case of intestinal obstruction, as one that is necessarily fatal, it will very likely prove so, but if we recognize the established fact that there is scarcely any form from which it is not possible for a patient to recover, we shall very likely save many cases that would otherwise die. Even in the most fatal class of cases in which an autopsy has revealed a band as the cause, the history of the patient has often shown that he has recovered from previous attacks precisely similar to the last fatal one, the cases that most frequently do well are the protracted ones that last sometimes for weeks, but recoveries are recorded in acute cases in which the patients appeared to be at the last gasp.

In cases of "ileus paralyticus," or obstruction from impaction of fæces, the cases that have been preceded by gradually increasing constipation, in which the colics have not been severe, in which there has been little or no vomiting, it may be proper to administer a dose of calomel, to be followed by castor oil or a saline laxative, and to resort to the use of enemas. In all other cases, no matter what the anatomical character of the obstruction may be, if the symptoms are acute, we must scrupulously avoid the use of cathartics of any kind whatever, they can only do harm by increasing the distention of the gut above the obstruction, by aggravating the peristalsis and the consequent pain, and the vomiting and its consequent, the collapse. Opium is the only agent that can help us under such circumstances, it is best given in the crude or solid form, by the mouth or rectum, and it must be given liberally in doses sufficient to put a stop to pain. If rejected by the stomach it may be used hypodermically, and there is no advantage in combining it with any other narcotic. Pfeufer, referred to by Leichtenstern as an authority, is a warm advocate for the exclusive use of opium in all forms of obstruction, he does not permit the use of even an enema until forty-eight hours after the subsidence of pain, and sensitiveness to pressure.

There can be no doubt, from the histories of recorded cases, that large enemas sometimes give prompt relief, but they must be used as recommended by Hegar, through the anus by a funnel apparatus—glass funnel, rubber tube, and rectal sound; the patient must be inverted, or in the knee-elbow or knee and head position; they must be given warm to the amount of several quarts, and they must be administered when the patient is narcotized with opium or ether, or both combined. The enemas must be repeated at least three times a day.

Massage or abdominal taxis has been advised by Jonathan Hutchinson, and by Sagar; the former employing it under anæsthesia, the latter in the warm bath.

I have stated that the cases of obstruction that have a tendency to get well are the subacute or protracted ones, in which all the symptoms are mild in character. In some of these, however, the obstruction which is generally found in the large intestine, and which may be stricture or tumor, refuses to yield, and it may be necessary to open the intestine above the stricture. The proper operation in such cases is colotomy, either right or left, depending on the situation of the obstruction. Some surgeons prefer in these cases to open the cæcum through the anterior abdominal wall, laparotyphlotomy or laparocolotomy, Littrè's operation.

There still remain for consideration those hyperacute cases that so often foil the best-directed efforts of the physician. Under this head must be classed the strangulations by false ligaments, bands, diverticles, twists, slits in the omentum, and internal hernias. The small intestine is the part most frequently involved, though twisting of the sigmoid flexure may be associated with grave symptoms. These strangulations all commence with severe agonizing pain, collapse, vomiting, and anuria, which rapidly reach a considerable height. They are to be met promptly with a liberal use of opium, anæsthetics, and large enemata, and if the symptoms are of such a violent character as to indicate early dissolution, the propriety of operative interference may be seriously entertained. The recognized mortality of these cases would seem to justify such a procedure, though in the absence of very definite knowledge of the anatomical character and seat, it may, by many, be regarded as better to trust to the chance of spontaneous cure. I feel sure that uncertainty of diagnosis often deters the surgeon from operating, the fear that the section may expose conditions not previously ascertained; and yet I think that in many cases a careful analysis of the symptoms ought to enable us to express a tolerably exact opinion.

If the symptoms indicate that the obstruction is high up in the small intestine, laparotomy is the best selection; if they are such as to point to the existence of constriction in the lower end of the ileum, we may do laparotomy, or Nélaton's operation—laparo-ileotomy.

Cases of intussusception rarely call for abdominal section; there do occur occasionally cases of acute invagination, with early and complete occlusion, in which it may be required, but they are very rare. According to Brinton, thirty or forty per cent. of

[1] Leichtenstern: Ziemssen Cyclopædia, vol. vii.; Hutchinson, Jonathan: British Medical Journal, August 31, 1878; Whitall, Samuel: New York Medical Journal, 1878; Brinton, William: Croonian Lectures, London Lancet, July, 1859.

such cases get well by processes resulting in separation of the intussuscepted portion. An operation done late might be dangerous; we might set free a sphacelated gut that was comparatively harmless, ensheathed within the receiving portion of the gut below, and isolated from the peritoneum by adhesions.

HALLUX VALGUS, WITH DISPLACEMENT OF THE SMALLER TOES.

By A. C. POST, M.D.,
NEW YORK.

In March, 1882, I was called to see I. D. S——, a gentleman who had a deformity of the left foot, with the following history: Age of patient, forty; his foot was in a normal condition until he was six or seven years of age, when he received a punctured wound from a pitchfork, on the inner side of the left foot, near the ankle. This was followed by severe inflammation, which continued three months, and left the foot in a flattened and valgous condition. The motion of the ankle was impaired, but not lost. When he was nineteen years old, he injured himself by jumping from a wood-pile, after exposure to cold.

This injury and exposure were followed by osteoperiostitis, resulting in necrosis of the tibia. He had also synovitis of the knee, leading to a very firm false anchylosis in a straight position, continuing to the present time.

When he was twenty years of age, I was in the part of the country where he resided, and was called to see him. I made an incision over the tibia, and removed a sequestrum. Soon after he began to go about, after the operation, his toes began to be displaced, and the deformity gradually increased until he came under my care in March last. The pressure of the great toe upon the other toes crowded them out of their normal position, and occasioned great pain and disability in walking. The fourth toe, especially, suffered so much from the pressure that he applied to a surgeon in 1867, and had it amputated.

The following was the condition of the anterior part of the foot when he came under my care: The great toe was subluxated at the articulation with its metatarsal bone, and was thrown obliquely outward and forward, resting on the dorsal surface of the second and third toes, which were subluxated downward and outward at the articulations with their metatarsal bones. The little toe was flexed at a right angle, at the articulation of its first and second phalanges, and its distal extremity was directed vertically downward.

On March 14 I performed the following operation: I made a longitudinal incision over the anterior part of the dorsal surface of the metatarsal bone of the great toe, extending it over the posterior part of the first phalanx. The incision over the metatarsal bone divided the skin, the expansion of the extensor tendon, and the periosteum, exposing the bone denuded of all its coverings. I opened the

joint, and caused the extremity of the metatarsal bone to protrude through the wound, and passed beneath it a chain saw, by means of which I readily separated the articular extremity from the body of the bone. I then cut down in like manner upon the dorsal surface of the distal extremity of the second and third toes, causing the bones to protrude, and excising their articular extremities with Liston's bone forceps. After this, I excised, in like manner, the distal extremity of the first phalanx of the little toe. The several toes were then brought, as nearly as possible, into their normal position, and maintained in it by a stiffened felt splint with digital divisions, applied to the plantar surface of the foot, strengthened with bands of hoop iron on the distal surface, and supported by strips of adhesive plaster and a roller bandage. Before applying the splint, I washed the wounds thoroughly with carbolic acid, 1 to 40.

March 15th.—The patient has suffered so much pain about the wounds, that he could not sleep without an anodyne.

March 17th.—The lips of the wounds are inflamed, and there is some suppuration.

March 20th.—The inflammation is subsiding. I

took off the plantar splint, and supported the great toe by a splint of hoop-iron, lined with lint, and secured to the inner side of the foot with strips of adhesive plaster. A compress of lint was then applied between the great toe and the second, and a strip of adhesive plaster was passed around the two toes, securing the second toe in position by the support of the great toe. The third toe was secured in like manner to the first and second. The little toe was supported by a strip of whalebone, wrapped in lint, applied to the dorsal surface, and secured by strips of adhesive plaster.

The parts were dressed in the same manner, on March 23d, 27th, and 30th, and on April 3d and 10th, after which I did not see the patient again until May 12th, when he brought me the cast exhibiting the improved position of the toes. The patient is able now to wear a laced boot, the anterior extremity of which is shaped so like that of the boots generally worn as not to attract attention. He walks without much discomfort, and there is considerable motion at the newly formed articulations. There is still some tenderness on pressure, but it is gradually diminishing.

ON THE USE OF SILKWORM-GUT SUTURES IN GYNECOLOGICAL SURGERY.

By G. H. BALLERAY, M.D.,

SURGEON TO THE WOMAN'S HOSPITAL, NEWARK, N. J.

The value of silkworm-gut as a substitute for silk or silver-wire sutures, in all gynecological operations, is not sufficiently appreciated by the profession in this country, and the object of this communication is to draw attention to the merits of this article and invite a trial of it. I have, during the past year, used silkworm-gut in all my operations for laceration of the cervix uteri and perineum, and for closing the abdominal wound after ovariotomy.

The advantage of silkworm-gut sutures, over those of silver wire, are, that they are more easily introduced, and much more easily removed. In operations for laceration of the cervix uteri, if the sutures are only drawn to the requisite degree of tightness, they may remain undisturbed for two weeks, without causing any ulceration. This, in my opinion, is a great advantage, for I believe that failure after hystero-trachelorrhaphy is very frequently due to too early removal of the stitches. The ease with which the sutures are removed is also a great advantage, as the line of union is not unfrequently strained, if not actually torn open, by bungling attempts to remove silver-wire sutures—even in the hands of those who, in introducing the sutures, display considerable manual dexterity. For operations on the perineum, and for closing the abdominal wound after ovariotomy, what is known by dealers in "fishing tackle" as "salmon-gut" should be used; while for closing a lacerated cervix, the intermediate size is quite strong enough. In no case of operation for lacerated cervix should the sutures be removed before the tenth day; and it is much better to leave them in until the twelfth or fourteenth day. Silkworm-gut should be kept either in water or some antiseptic solution for some hours before it is required for use, for if not thoroughly moistened it is stiff, and difficult to tie in a tight knot.

Dr. George Granville Bantock (Surgeon to the Samaritan Hospital for Women, London), uses silkworm-gut sutures in all his operations (four-fifths of which are ovariotomies), and it was through his teaching that I became a convert to their use; but I need hardly say that his excellent results are in nowise due to the kind of suture that he employs, but to his neatness and dexterity as an operator, and his consummate skill in the treatment of his cases.

GELSEMIUM IN RHUS POISONING.

By BENJAMIN EDSON, M.D.,

BROOKLYN, N. Y.

At this season of the year poisoning from ivy, oak, and mercury is far from infrequent. The affliction may not be particularly dangerous, but it is often painful, tedious, and annoying to both patient and physician. The usual treatment by the application of lead washes, alkalies, and various mercurial solutions, so far as I have observed, has rarely exerted any marked effect upon such cases, and has often been destitute of the merit of being even palliative. The chief satisfaction has usually been that something was being done, and presumably the best that could be done under the circumstances. Bromine in olive oil is claimed to give prompt relief, but of its use I have had no practical knowledge.

In spite of the various modes of treatment, the summary given by Duhring, "Disease of the Skin," p. 326, represents about the general experience: "The process may continue from one to six weeks according to the severity of the attack and other circumstances, as, for example, treatment. Under proper treatment the majority of cases recover in the course of a fortnight."

Last summer it was my unusual fortune to see a large number of cases, and their treatment proved so satisfactory that I feel justified in calling attention to it. The first case was a very severe one—that of a lad fourteen years of age. I saw him on the third day after he had come in contact with the poisonous plant in New Jersey. I found his hands, arms, and legs swollen to nearly double the ordinary size, skin over a portion of the affected part tense and hot, covered with nodules and vesicles of various sizes and stages, some of them burst open and discharging an abundance of irritating fluid. The penis and both cheeks were also involved to some extent. The suffering was almost unendurable. Nothing that had been applied had given any relief. Having used gelsemium for some years with much satisfaction in pruritic troubles, it occurred to me that it might at least alleviate the pain in the case. I therefore extemporized a wash in about the following proportions:

℞.	Acid. carbolic	ʒ ss.
	Ext. gelsem. fluidi.....	ʒ ij.
	Glycerinæ	℥ ss.
	Aquæ.....ad.	ʒ iv.

M.

With this, cloths were kept moistened and applied to the parts affected. Internally, the fluid extract gelsem., ♏ ij. every three hours.

The pain speedily subsided. The burning, itching, corroding sensation ceased. Within thirty-six hours the disease appeared to be effectually *killed*. The progress to complete recovery was direct and rapid.

Subsequent cases were treated in essentially the

same manner, with the exception of two, in which carbolic acid was not used, and these yielded no less promptly than the others.

From the two series of cases thus treated I have great confidence that gelsemium, topically and internally, will afford prompt and permanent relief in rhus poisoning.

83 St. Mark's Avenue, Brooklyn.

Progress of Medical Science.

A Successful Case of Sponge-Grafting.—Dr. Norman Poeritt reports a case of sponge-grafting, conducted according to the method proposed by Dr. Hamilton, in the *Edinburgh Medical Journal*, for May, 1882. Those readers who are unacquainted with Dr. Hamilton's process of sponge-grafting are referred to his original paper in the same journal for December, 1881. The patient was a boy fourteen years of age. He had fallen against a revolving drum, and his right cheek presented an oval charred cavity four inches long and two inches in the greatest breadth. The cavity had the appearance of a burn, the result of the severe friction to which the surface had been exposed. A piece of sponge, prepared according to Dr. Hamilton's directions, was so placed as to exactly fill the cavity, without rising above its margin. Protective silk was laid over the sponge and the whole secured with plaster. Boracic lint and wadding and a bandage completed the dressing. On the fourth day after the dressing was applied, a small granulation was found protruding through the upper portion of the sponge. Five days later the sponge had been completely concealed by the granulations, but could be detected by displacing the latter with a forceps. After two weeks the whole of the sponge had disappeared, with the exception of a few small particles. Its place was occupied by healthy granulations, at the border of which cicatrization was taking place. After another period of four days the wound was only three-fourths of an inch long and one-fourth of an inch broad, and was rapidly cicatrizing.

The Relations between Asthma and Mucous Polypi of the Nasal Passages.—The *Archives Générales de Médecine* for May, 1882, contains the termination of a serial article by Dr. Joal, of Mont Doré, upon the above subject. The conclusions réached by that author may be summarized as follows: 1. Nasal mucous polypi sometimes occasion asthmatic symptoms. 2. This symptomatic asthma is principally observed in gouty subjects. 3. The disease is usually produced by a reflex action secondary to an irritation of the nasal mucous membrane. 4. The reflex excitation may, however, have its point of departure in the sensitive filaments of the pneumogastric which supply the pharyngeal or bronchial mucous membrane. 5. Asthma may be developed as the result of catarrhal and emphysematous lesions referrable to nasal polypi. 6. The asthmatic paroxysms are relieved or completely disappear after the removal of the polypi. 7. The nervous symptoms provoked by nasal polypi consist, sometimes, in spasmodic paroxysms of sneezing.

External Follicular Vulvitis.—The following is a *résumé* of the conclusions arrived at by Drs. Gonguenheim and Soyer in the course of an article with the above title, published in the *Annales de Dermatologie et de Syphilographie* for April, 1882. The varieties of follicular vulvitis are: 1, simple acute follicular inflammation; 2, acne due to different causes; 3, syphilitic acne; 4, syphilitic follicular inflammation. Simple follicular vulvitis is rare. It terminates most frequently in furuncalar inflammation. The acne due to causes other than syphilis does not differ, in any way, from the same affection when developed in other regions. Syphilitic acne does not differ from the preceding variety. It may not appear in a pustular form, or, having become pustular, may ulcerate. Several ulcerated follicles may unite and simulate a simple chancre. The syphilitic follicular inflammation is an interesting but often misinterpreted form of simple chancre, which it usually accompanies, and to which it is most frequently secondary. This variety of chancre develops very slowly; it may become abortive, or may ulcerate and assume the appearance of a true chancre. The pus from syphilitic folliculitis is quite as virulent as that of a simple chancre. The differential diagnosis of these various affections is, generally, easy. Simple acute folliculitis is distinguished by the rapidity and severity of its course. The nature of the various kinds of acne is determined by the concomitant signs of the diathesis or disease producing them. Syphilitic follicular inflammation is distinguished from simple acute folliculitis by its limited extent, by its tendency to rapid ulceration, and to the invasion of adjoining follicles, and by the presence of a chancre in its neighborhood. In doubtful cases inoculation settles the question. The morbid anatomy of these varieties of follicular inflammation is not different from that of folliculitis in other localities. Topical treatment is alone necessary for simple and syphilitic follicular vulvitis. Internal and external treatment must be combined in cases of chronic follicular inflammation of, or folliculitis dependent upon a diathesis.

Sensory Epilepsy.—In the *New York Medical Journal and Obstetrical Review* for June, 1882, Dr. Allan McLane Hamilton presents a paper on cortical sensory discharging lesions (sensory epilepsy), or that form of epilepsy in which the sensory element preponderates, whether as an aura preceding a motor discharge, or occurring as a part of a paroxysm in which there is little or no succeeding motorial disturbance, but simply a discharge consisting of a preliminary alteration of special sensibility, and an immediate subsequent stage of unconsciousness. In the majority of these cases there is, he remarks, the simplest form of subjective consciousness of sensory impressions, most of the attacks consisting of the primary stages suggested by Jackson, such as a sudden stench in the nostrils, or colored vision; but in two or three instances there has been much more than this, and the phenomena have been quite remarkable. In some cases the occurrence of a transient contraction of the fingers of one hand lent additional interest to the history, especially in regard to localization. In one case the patient's sensory condition was not the dreamy state referred to by Jackson, but there was always an hallucination of taste, the patient declaring that he had tasted copper or some other nauseous substance; and in other cases there were equally striking proofs of the primary involvement of the cortical centers. The occasional occurrence of hallucinations as a part of the epileptic attack has been mentioned by various authors. Brierre de Boismont, Esquirol, Delasiauve, Maison-

neuve, Billod, Sommers, Bergmann, Guislain, and Tigges, as well as many other writers, have furnished cases which began with sensory auræ or hallucinations, but none of them, says Dr. Hamilton, have made a distinct classification of sensory and motorial epilepsy, and but little mention is made of the disease where the paroxysms consist solely of sensory phenomena, the disturbance of motility being absent. He has not, so far, met with cases in which the individual was influenced by his hallucinations to express them by special motor acts before the attack, except in an unimportant way. On two occasions he has been present at the beginning of a sensory attack. In one instance the patient complained afterward that he smelt a horrible stench. Immediately before losing consciousness he carried his hand up to his nose, and immediately afterward became oblivious to everything about him. A similar action was performed by a patient who forcibly placed both hands over his eyes, as it afterward transpired, to keep out a bright light that blinded him. In the light of all that has been done in the localization of cerebral disease, Dr. Hamilton thinks that we should discover, if possible, the part played by the cortical sensory centers in the genesis of such epilepsies. So far, little has been brought forward to connect lesions of the sensory centers with special symptoms. In our pathological discussion of sensory epilepsy, the distinction should be made between lesions of the thalamus opticus and those of the cortical sensory zones, for in the one instance the sensory disturbance may be called the essential, while in the other there may be said to be an affection of special subjective consciousness. If an impression upon the organ of sense is sufficiently intense to impress the infra-cortical central sensory apparatus (thalamus opticus) centripetally, it does not follow that there need be any implicated alteration of function in the cortical sensory regions. A lesion of the posterior part of the thalamus opticus, for example, may result in blindness—a *mechanical* blindness, if such an expression can be used, though there are exceptional cases reported by Brown-Séquard where even this is not the case—but it will not produce *word*-blindness, a purely psychical defect. There must be some altered cortical function to account for the unmistakable mental operations which permit the individual to recognize the altered sense-states and enter into the involuntary formulation of hallucinations which are afterward remembered. The author therefore does not believe that the disease of the thalamus opticus *alone* plays any part in the origination of hallucinations. He thinks we may recognize a form of epilepsy of sensorial character, the motorial features being either absent or insignificant; that such sensory manifestations arise from an unstable condition of the sensory cortical centers; that a light grade of sensory disturbance may indicate simply a suspension of inhibition through an exhausted state of the perception centers which are infra-cortical, or a suspension of the influence of the superior cortical centers, in which case the process is more complex, and the result may be the formation of hallucinations.

Terrier on a First Series of Twenty-five Ovariotomies.—M. Terrier has summarized a number of conclusions from his first series of cases. Among them the following are the most noteworthy: Ovariotomy is usually performed between the twentieth and fortieth years of life, though it may be practised up to the sixtieth. Ovarian cysts produce little change in the menstrual function, and do not necessarily occasion sterility, partly because they may be unilateral, partly from the slowness of their growth. The evolution of these tumors is often very rapid. In all cases an early operation is indicated. Sometimes the morbid phenomena which attend their development may be trivial, except so far as the bulk of the growth is concerned, at which times severe pain and peritonitis may supervene, and in such cases adhesions are pretty uniformly produced. Ascites is an important symptom, especially if well marked. It indicates the presence of polycystic vegetating growths. Slight ascites has little diagnostic or prognostic significance. Œdema of the limbs and of the abdominal walls has a constant relation with the volume and seat of the growth. Pulmonary complications and phlegmasia alba dolens are serious, but fortunately rare concomitants. Puncture for purposes of evacuation or exploration is free from danger if accomplished with care. It ameliorates the symptoms and enables the surgeon to be more precise in diagnosis and prognosis. The results of operations have varied little. Full Listerism has been employed, or other less exclusive methods. Personal experience does not enable M. Terrier to say whether or not it is better to fasten the pedicle within or without the abdominal walls. Multilocular cysts are the most frequent. The percentage of mortality was twelve, *i.e.*, three out of twenty-five. The cause was uniformly acute suppurative or non-suppurative peritonitis. Among the sequences of the operation, central hernia through the abdominal cicatrix is mentioned, and it is inferred that serious trouble may result therefrom.—*Revue de Chir.*, May, 1882.

Tuberculous Synovitis of Tendinous Sheaths.—Although tuberculosis has been found in nearly every part of the human body, it does not seem that there has been any distinct proof offered of its presence in the sheaths of tendons. M. Janin, in the service of M. Trélat, at the Hôpital Necker, now publishes a case which he thinks has the histological evidence that is necessary to establish the fact satisfactorily. A female, nineteen years of age, of strumous habit, and constant tendency to colds, entered the hospital in December last. She was found to have inflammation of the flexor tendon sheaths of the right middle finger, the tumor, eight to nine centimetres long, extending under the palmar arch. It was removed in its totality by M. Trélat. A microscopic examination by M. Latteaux showed that it contained nodules, cheesy foci, and giant cells, which were thought to substantiate the diagnosis of tuberculosis, since the author holds that these histological findings are proof conclusive of the constitutional disease.—*Prog. Médicale*, June 19, 1882.

Source of the Bothriocephalus Latus.—Though it has long been known that tapeworms gain access to the body through the medium of measly animals, hogs furnishing the tænia solium, horned cattle the tænia mediocanellata, the source of the bothriocephalus latus has been unknown, though, according to Knock, it develops in the water. This author holds that the parasite, unlike the other tapeworms, has no intermediate bearer, though it seems now clear that the cysticercus has been found in certain fish, and it was even suspected that the pike and lota were the fish usually selected. Since the cysticerci cannot with certainty be differentiated from other larval forms, they have been fed to cats and dogs, developing the mature bothriocephalus, which

in size and other characteristics could not be distinguished from the human form. In pike the parasites are said to be *usually* found, the middle-sized fish having from forty to fifty cysts. Of more than sixty that were examined, but one had muscles that were not so infested.—*St. Petersburger Med. Woch.*, May 16, 1882.

HENRIET ON SUB-PERIOSTEAL AMPUTATIONS.—Apropos of a communication made some time ago to the Société de Chirurgie, M. Henriet has undertaken a review of the subject (*Tribune Médicale*, April 30, 1882). Sub-periosteal amputation consists, as is well known to surgeons, in preserving a considerable portion of the periosteum beyond the point where the bone is severed by the amputating saw. This redundant membrane constitutes a cuff (manchette) as it were. In M. Méaise's patients, one in particular, on whom an autopsy was subsequently made, proved how practical the measure may be, for it was found that the periosteum had, in covering over the cut end of the bone united firmly to it, obliterating the medullary cavity, and of course presumably preventing the ordinary hemorrhage from the bone. And yet the operation has not met with favor, because either there has been a lack of periosteum, or it has been found so lacerated after denuding the bone that its efficacy was thought problematical. The periosteum of the adult, which has completed its task of bone-formation, lacks the qualities suited for the purpose and is thin, as compared with the same membrane in its active period of development or about an inflamed joint. M. Ollier, however, believes that it is an operation admitting of generalization, the dangers being on the side of an excess of bone-production. Thus, in young children, he has found the periosteum produce osteophytes to the damage of the stump. Still he admits that often he does not practise the operation.

If one needs periosteum, says M. Henriet, in considering the pros and cons of the measure, one does not need too much. The operator should strip the bone carefully, but be mindful at the same time that the absolute integrity of the periosteal cuff is not indispensable, having in fact sometimes the drawbacks that have been mentioned.

From an American standpoint it still appears doubtful if the precise field for the operation has been well defined. Evidently youth of bone and some sort of antecedent inflammatory action in adjacent parts renders the new production of bone more probable.

NEW APPARATUS FOR TREATING CARIES OF THE SPINE.—Dr. E. Noble Smith has described a new brace and support for treating Pott's disease. The practice of mechanical separation of the carious surfaces he maintains is contrary to the natural processes of cure, which is effected by the coalescence of these surfaces. Caries of the spine should be treated as a local disease, by affording support to and fixation of the spine. This can best be accomplished by spinal supports in the form of back splints combined with recumbency (supine or prone) or by the plaster-of-Paris, felt, or some other kind of jacket without such recumbency. He is opposed to the plaster jacket because thoracic respiration is impeded, and because the suspension required to allow of its application, may prove dangerous, while, too, the position which it produces when first applied is not retained. The treatment he advocates is that introduced by Mr. Chaucer, and called "the skeleton adaptable metal splint." It consists of two light steel bars passing on either side of the spine from a pelvic belt upward to about the level of the second or third dorsal vertebra, where it joins a pad connected to the shoulders by means of straps. The bars are bent to conform with the deformity above, but not below the projecting portion of the spine. Results claimed for this bandage are, fixation of the spine, freedom in thoracic respiration, ease of adjustment, and readjustment if necessary, and daily correction of the support. The author insists upon the importance of recumbency (preferably in the prone position) so long as the disease is running an active course.—*British Medical Journal*, May 13, 1882.

CONTRIBUTIONS TO THE DIAGNOSIS OF ALBUMINURIA.—We are gradually coming to realize the diagnostic and prognostic importance of albumen in the urine, and are being put on our guard against conditions of the urine which simulate albuminuria. Recently, Mr. Carter has offered evidence which appears to have clinical value. Thus, in his paper read before the Cambridge Medical Society on April 14th last (*Lancet*, May 13, 1882), he instanced other substances, such as globulin, ptyalin, pepsin, trypsin, which occur in the urine and may be mistaken for albumen. Statistics show, he claims, that in about one-half the cases of albuminuria, the cause is other than usual. Sometimes it is due to a disorder of the nervous system from prolonged anxiety, or it may be connected in some way with a disturbance of the sexual functions, and this chiefly in males. Sometimes the digestive tract may be out of order, and then the name "food albuminuria" is applicable. In other instances, again, the blood may be at fault, through some change that has taken place in the liquid itself, or it was caused by retardation of flow through some mechanical impediment.

In pregnant women both of these last-named conditions are maintained, for the gravid uterus not only is an obstacle that retards the ascending blood current, but the quality of the fluid blood is altered. In remarks made at the same meeting by Mr. Bradbury, attention was called to the importance of determining the presence or absence of high arterial tension.

Albuminuria coincident with high arterial tension was held to indicate, as a rule, commencing Bright's Disease.

SANITARY CONDITIONS IN RELATION TO THE TREATMENT OF WOUNDS.—Dr. Cabell, at the last meeting of the American Surgical Association, submitted the following propositions:

First.—Statistics show lessened mortality of late years in certain capital operations, especially those involving abdominal section. This is due in part to improved methods, but very largely to strict antiseptic precautions. The mortality in amputations and joint operations has not diminished in equal ratio.

Second.—The continued high rate of mortality from amputations in cities stands in contrast to the decreased general mortality and shows that the sanitary improvement of hospitals is behind-hand.

Third.—The question is asked: Is twenty-two per cent. of mortality for all amputations above the wrist and ankle the best that can be expected? The various influences which oppose the repair of wounds must be studied for an answer.

Fourth.—The prime factor in the repair of wounds is healthy blood, and this should be considered.

Fifth.—Results depend upon constitutional pecu-

liarities, and upon hygienic surroundings, before, during, and after operation. These must also be considered.

Sixth.—Shock, a most common cause of death after primary amputations, owes its malignant potency to the fact that the system has not fully recovered from the previous injury. The desideratum is to prolong the primary or apyretic period. This may be done by Dr. Stephen Smith's method of carbolizing the wounds.

Seventh.—Septic complications have heretofore been the most common cause of mortality.

Eighth.—Much may be done to prevent sepsis by careful attention to all details.

Ninth.—Large hospitals, even those on the block system and of several stories, are not *necessarily* subject to septic diseases, and the mortality here *may* be kept as low as in cottage hospitals or rural districts.

Tenth.—After observing every other sanitary precaution there is good reason to believe that an additional protection of great value may be derived from antiseptic precautions practised in conformity with the Listerian principle.

Eleventh. — "Listerism," practised *de rigueur*, while not so essential in cases of amputation, has achieved results in operations upon joints and in "abscesses from congestion" which have not been paralleled by any other system of treatment.

Twelfth.—The preponderance of evidence is in favor of its utility in ovariotomy and abdominal sections generally.

Ollier on Periosteal Excision of the Wrist.—At a recent meeting of the Academie des Sciences, M. Ollier, of Lyons, stated that, thanks to the combined advantages of Lister's and the sub-periosteal methods, preservation of the hand may now be safely secured in caries of the wrist through ablation of the carpal bones and resection of the radio-carpal joint. Notwithstanding the numerous bones in the carpus, its many articulations, and the limited surfaces of the bones covered by periosteum, the surgeon may still preserve a periosteo-capsular sheath, that will be converted into a new fibrous tissue, which, in the event of the new bone-formation failing, will assure union between the bone of the metacarpus and those of the forearm, and prevent the ordinary results of this operation, viz., flaccidity of articulation and displacement or rigidity of tendons, which have been the main obstacles in re-establishing the functions of the hands and fingers.—*Courrier Médical*, April 29, 1882.

The Antiseptic Treatment of Wounds.—Dr. W. T. Briggs submitted the following conclusions regarding this subject at the American Surgical Association:

First.—The germ theory of wound infection is not established.

Second.—The antiseptic treatment of wounds after operations and injuries is not limited to Listerism or any other special method, but is based upon broad general principles.

Third.—Antiseptic surgery embraces every condition or agent that tends to prevent putrefactive changes in wounds, or to remove or neutralize the evil effects of such changes when they have occurred.

Fourth.—All wounds are healed by reparative inflammation.

Fifth.—All wound accidents are the result, either directly or indirectly, of destructive inflammation.

Sixth.—The antiseptic treatment of wounds, properly considered, consists, first, of such means as will restrain inflammatory action within reparative bounds; and second, of such means as will subdue excessive action, and remove or neutralize the effects of destructive inflammation.

Carbolic Acid in the Abortive Treatment of the Eruption in Small-pox.—New and plausible methods or facts sustaining new methods are always sought for eagerly by the profession, though they usually accept them with a more than usual degree of caution. Now Mr. M. D. Makuna comes forward with a paper which he has read before the Medical and Chirurgical Society of London, in which after enumerating the various ectrotic plans that have been suggested from time to time, he recommends that one first introduced by Dr. Eades, of Norwich, in 1878, and subsequently employed by Sir Joseph Fayrer. It consists in cauterizing the vesicles with carbolic acid. Mr. Makuna finds that eruptions on the face, under the carbolic application, reach the end of the pustular stage in four or five days, while similar eruptions on the body which naturally are far less severe, without the carbolic application, do not mature until many days later.—*Lancet*, May 13, 1882.

Foreign Bodies in the Air-Passages.—Dr. Weist, at the recent meeting of the American Surgical Association, read a paper on the above subject. The following conclusions were submitted by him:

First.—When a foreign body is lodged either in the larynx, trachea, or bronchia, the use of emetics, errhines, or similar means, should not be employed, as they increase the sufferings of the patient, and do not improve his chances of recovery.

Second.—Inversion of the body and succussion are dangerous, and should not be practised unless the windpipe has been previously opened.

Third.—The presence simply of a foreign body in the larynx, trachea, or bronchia, does not make bronchotomy necessary.

Fourth.—While a foreign body causes no dangerous symptoms, bronchotomy should not be performed.

Fifth.—While a foreign body remains fixed in the trachea or bronchia, as a general rule, bronchotomy should not be practised.

Sixth.—When symptoms of suffocation are present, or occur at frequent intervals, bronchotomy should be resorted to without delay.

Seventh.—When the foreign body is lodged in the larynx, there being no paroxysms or strangulation, but an increasing difficulty of respiration, from œdema or inflammation, bronchotomy is demanded.

Eighth.—When the body is movable in the trachea, and excites frequent attacks of strangulation, bronchotomy should be performed.

Innervation of the Rectum.—Irritation of the nervi erigentes causes, according to L. Fellner (*Centralbl. f. Med. Wissensch.*, No. 22, 1882), a contraction of the longitudinal fibres, while it does not affect the circular fibres. These are supplied by fibres from the posterior mesenteric ganglion. The irritation of the long muscle fibres depends not upon the condition of the rectum and its contents, but upon peculiarities of the blood in its vessels.

The Seat of the Muscle-Sense appears to be, from a case cited by Westphal (*Charité Annalen*), in the lower part of the large pyramidal cells of the cortex.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, July 29, 1882.

THE DECADENCE OF THE AMERICAN FAMILY.

We do not like to be doleful, but it is impossible to ignore some of the facts that have been presented within the last year or two by Dr. Goodell, Dr. Nathan Allen, and others. These facts relate to an alleged change in the physical organization of our men and women, and to the decadence of family life among Americans. Dr. Allen, who has been studying this subject for many years, presents the case very directly in an article entitled "The New England Family" *(The New Englander)*. It is asserted that the objects of the institution of the family are three: the propagation of children, the preservation of chastity, mutual help and company. In each of these respects the American family, especially the New England family, shows a marked and progressive deterioration, since one hundred years ago.

As regards the propagation of children, it is shown that the average native New England family is very much less productive than formerly. This, we are told, is due not alone to the induction of abortions and the prevention of conception, as was at one time asserted, but to a change in the physical organization of the parents. Individuals in whom the balance of tissues and functions is not well preserved are less fertile. The very nervous, or the very lymphatic temperaments accompany a lessened reproductive power. The tendency of the age is to a one-sided, intellectual cultivation and undue and artificial development of nervous tissue; hence a comparative sterility. The birth-rate in New England families has been steadily declining, until now it is lower than that of any European country except France. One additional element in this, no doubt, is the habit of delaying marriages—a habit made almost necessary by the more expensive style of living which is demanded, and by what some consider the selfishness of young men who prefer not to sacrifice their liberty to the responsibility and expense of domestic life.

Another indication of family deterioration is the increase of divorces. These were rare a hundred years ago, now they number one to about twelve marriages in New England, while among our foreign populations, who are less educated, and even less moral, the ratio is one to forty or fifty.

Many evidences are brought forward to show that marriage does not accomplish all that it has done or ought to do in preventing adultery. The frequency of the charge of adultery in divorce suits is great, it being made in about one-third of the cases. The increase in late marriages, which leave many more of both sexes exposed to temptation, is an undoubted factor in the alleged increase of licentiousness.

As regards the third object of marriage, "mutual help and company," our author alleges the decrease in the number of marriages, the modes of life and business by which men are kept away from their homes, turning their whole energies in every direction except the making home pleasant. To the New York, as well as New England business man, home is often only a place to eat and catch his breath in during the intervals of business. It is also alleged that New England women are losing their love of offspring and home.

The family life of the American, therefore, according to the above indictment, occurs more rarely, begins later in life, is blessed with fewer offspring, is accompanied with less happiness and less fidelity; is, in fine, less of an institution than formerly. The more artificial attractions of this world have supplanted it.

Dr. Allen's remedy is in an attempt to revive the family spirit again. As the foundation of Church and State, as the institution by which good citizens are made, its preservation, he truly asserts, should be jealously guarded. The clergyman and moralist, the statesman and, by no means least, the physician are urged to use their influence to prevent this physical and family deterioration, which, although perhaps exaggerated by some, unquestionably exists.

THE SUNFLOWER IN MEDICINE.

The sunflower (*Helianthus annuus*) has been, for some time, the object of very serious regard on the part of those who wish not only to live, but to live beautifully. It is just now, perhaps, the most conspicuous ornament of everything not too purely sacred or too rigidly scientific. Medical science is very closely linked with human interests and fashions. It becomes us to live up to these and follow our fellow man (at a decent distance) in his present floricultural vagary. We are somewhat surprised, however, to find that until lately the medical aspects of the sunflower have been almost completely neglected. It is, indeed, reported that several medical students have bought

sunflower pen-wipers, and a rural correspondent informs us, incidentally, that he is raising a crop of the genuine plant for the base purpose of feeding his hens. But this is an inadequate treatment by the profession of the leonine blossoms over which poets sing and ladies rave.

We have to call attention, therefore, to the fact that, medicinally, the sunflower is a thing not to be despised. It is an anti-periodic and a counter-irritant of the best kind. About fourteen years ago an article appeared in this journal, showing that the sunflower, freely planted over malarious districts, had the power of dissipating the miasms. A district upon the Scheldt, in Belgium, was said to have been made quite healthy by the growth of this now supreme form of vegetation. In an address recently delivered by Dr. A. S. Heath before the Farmers' Club, in this city, the utility of sunflowers in keeping off malaria is forcibly urged. Farmers who live near marshes or stagnant water are advised to plant them abundantly around these sources of infection. The advantages, pecuniary and æsthetical, of surrounding one's self with sunflowers, instead of filling the system with quinine, appear to be very great.

The stalk of the mature helianthus, when dried, forms one of the best natural moxæ. The pith contains a considerable amount of nitre, burning slowly and quite steadily. The moxa is not, at present, in vogue, but it must have its fashion again, and there is no time when it could be so easily rendered popular and pleasing. He would be a poor disciple of the beautiful who could not cheerfully endure to be burned a little with art's most popular vegetable expression.

The medicinal value of sunflower oil, or sunflower tea, has not yet been satisfactorily determined. We may look for investigations in this direction from some of our young medical societies. They may find a solid therapeutical basis for the present idolization of a flower which, to the conservative mind, seems to be a good deal of an artistic sham.

TWO CURES OF RABIES ANNOUNCED.

A CASE of singular interest was reported on June 13th to the Academy of Medicine, Paris. M. Denis Dumont, of Caen, asserted that he had cured a case of hydrophobia by subcutaneous injections of pilocarpin. He had scarcely finished his speech when M. Bouley arose and announced that he had the report of another case, under care of M. Dartigues, of Pajol, cured in a similar way.

M. Dumont's case is carefully reported, and his claim deserves attention.

The history of the case is briefly as follows: On April 16th last a mad dog bit three persons, a man, a woman, and a child, all living near Caen, France. The man, a shepherd, thirty-eight years old, was bitten upon the arm. The wound was cauterized with nitric acid, and it rapidly healed. Thirty-four days passed with no especial symptoms. At this time the woman died with all the signs of hydrophobia. The man was told of this. He became much frightened for himself, was very nervous, and could not sleep. Two days later he began to suffer from burning thirst, which he could not quench on account of paroxysmal contractions of the pharynx; from precordial distress and great epigastric pain. On the next day convulsions developed. He rushed from the house and rolled upon the earth, with hoarse cries, attempting to bite everything that came near. He was taken to the hospital. Convulsions set in again, accompanied for a short time by unconsciousness. There was abundant salivation and sweating. Deglutition was almost impossible. Between the attacks the patient spoke rationally, and was conscious of his condition. Bromide of potassium and codeia were given, with no result. The case grew worse. On the next day nitrate of pilocarpin was given subcutaneously three times in doses of one centigramme. There was profuse salivation and sweating, followed by almost immediate relief in the symptoms. By the next day all danger had passed.

M. Dumont considers this case to have been one of rabies, for the following reasons: 1. The course of the exacerbations and intermissions with the accompanying symptoms of intense thirst, dysphagia, hoarse voice, tendency to bite (?), temporary loss of consciousness, clonic and tonic convulsions, all coincided with the known features of rabies. 2. The duration of the incubation, which was thirty-six days. 3. The death, from rabies, of the woman bitten by the same mad dog. 4. The prodromal symptoms ushering in the acute attack. 5. The modification in the appearance of the wound made by the dog. This, during the attack, became livid, opened a little, and poured out a viscid secretion.

M. Bouley reported the case of asserted rabies successfully treated by M. Dartigues, of Pajol. The patient, a merchant, was bitten on the leg by a mad dog. This was on the 29th of July. The wound was cauterized and healed. Sixty-six days passed with no symptoms. He was then attacked with headache and malaise. The same night the symptoms of rabies appeared. Exactly what they were is not, however, said. M. Dartigues was called and at once instituted his treatment, as follows: he gave, within ten minutes, half a milligramme of arsenite of strychnine and the same amount of hyoscyamin, together with one centigramme of bromide of camphor. At the end of half an hour he began to give hypodermics of pilocarpin. He also put the patient in a hot-air bath. He kept up this sweating treatment for five days, when the patient was relieved of all symptoms.

The report of M. Dartigues' case was very incomplete. It was severely criticized by the Academy.

In discussing the question of the value of pilo-

carpin in rabies, it was shown that this drug had been tried in six cases without any favorable result previously to the above cases.

Looking at the question calmly, it is impossible to deny the value of M. Dumont's case, although a doubt might be legitimately entertained as to its really being one of rabies. The case of Dartigues, as reported, is of no scientific value. We cannot say as yet, therefore, that rabies has unquestionably been cured by pilocarpin, though it seems probable.

RECENT CONTRIBUTIONS TO THE TREATMENT OF DIPHTHERIA.

THE constant succession of new remedies for diphtheria is of interest, chiefly because it shows the activity and unrest of the growing science of medicine. We no longer expect any absolute specific, and the wise physician will not abandon his old therapeutic measures without much caution.

In a series of very lengthy articles, contributed to the *Berliner Klinische Wochenschrift*, Dr. Otto Seifert commends the use of chinolin in the treatment of diphtheria. His article is carefully written, and consists almost entirely of detailed reports of cases submitted to this treatment. Donath has asserted that chinolin is a powerful disinfectant, and that even in a 0.2 per cent. solution it prevents decomposition and hinders the development of bacteria, being stronger than carbolic acid, boric acid, alcohol, or sulphate of copper. The tartrate of chinolin is often used because it is more soluble. It is, however, very disagreeable to the taste and smell. Dr. Seifert, therefore, made a five per cent. solution of the pure drug in equal parts of alcohol and water. He also made a 0.2 per cent. solution with a smaller proportion of alcohol. In his cases the strong solution was penciled upon the throat every three or four hours or less frequently, while the weaker solution was used as a gargle, a little of it being sometimes swallowed. The records of the cases show that almost invariably the penciling was followed by a marked decline in the fever, and by a general as well as local improvement in the symptoms. The cases are designated as mild or severe. In nearly every case they got well, but the strength of the evidence for the new drug lies in the fact that the record shows such marked effects always following local applications.

Dr. Theodore Clemens relates in the *Allgemeine Medicinische Central-Zeitung* his method of treating diphtheria with alcohol inhalations. The value of alcohol in diphtheria is admitted, and Dr. Clemens' method is not an essentially new one. He uses a mixture composed of: ℞. Spirit. vini rectific., 120. grammes; chloroform, 15.0; acid salicylic, 10.0; olei lanæ pini, 3.0. This is dropped upon salicylated cotton and the patient made to inhale it for five or ten minutes, every quarter or half hour, or less frequently, according to the symptoms. Dr. Clemens commends his treatment in a general way, without relating cases.

M. Henri Bergeron recently read a communication before the Medical Society of Paris upon the treatment of diphtheria by the inhalation of fluoric acid. This method he had employed, and had made a preliminary report concerning, in 1879. The method is as follows: A small vessel of lead is placed in a water-bath and kept at a temperature of between 90° and 100° F. In the leaden vessel, a teaspoonful of fluor spar and a sufficient quantity of sulphuric acid are placed. The apparatus thus arranged disengages fluoric acid. It is placed near the patient, who is made to breathe with the mouth open. The materials are renewed about five times in the twenty-four hours. Dr. Bergeron claims that all cases treated by this method within the first twenty-four hours after the disease has appeared will get well. In forty cases which he reports, only three died. The discussion which followed the reading of this communication showed a good deal of incredulity toward the new method upon the part of the French physicians.

A Russian physician, Dr. P. Hampeln, of Riga, relates his experience with pilocarpin, cyanate of mercury, and benzoate of soda, all of which have of late been highly vaunted as remedies in diphtheria. He found them all to be disappointing and unsatisfactory. He recommends highly, however, the use of oil of turpentine in severe cases, according to the method described by Bosse, of Donau, in 1880 and 1881. Large doses (℥i. of the pure oil) produced remarkably favorable results in desperate cases, according to Dr. Hampeln's experience.

DEATHS FROM CHLOROFORM.

Two more deaths from chloroform have been reported recently as occurring in London hospitals. As usual, all the necessary precautions were taken and the fatal results were sudden and unexpected. It is, indeed, the old story, in which it is made apparent that chloroform is a treacherous anæsthetic, that it kills without warning, and that there is no condition of the patient, however healthy to outward appearances, which can guarantee the administrator against a most distressing disaster. And yet in England chloroform still continues to be the favorite anæsthetic. Here we have learned not to trust it, and sulphuric ether replaces it almost entirely, save in cases in which it is necessary to induce anæsthesia in very young children and in cases of parturition. It would be well if professional sentiment concerning the positive dangers of chloroform were as sufficiently pronounced in other quarters as in this country. But we learned the lesson early in the history of anæsthesia, and have so far profited by it that many apparently unaccountable deaths have been prevented thereby. The conveniences of administration, rapidity of action, and comparative

agreeableness of the drug to the patient, are more than offset by the chances of occasionally killing the patient as suddenly and as unexpectedly as if by lightning. Happily, here the surgeon who uses chloroform exclusively has to take an extra risk and assume an extraordinary responsibility. In case of accident, he is called upon to give some good reason why he preferred chloroform to ether, or rather, why the use of the latter was, in his opinion, contra-indicated. The majority of fatal results from chloroform in this country have occurred in connection with more or less trivial dental operations, but a sufficient number, few as they are, have been associated with major operations to cause most American surgeons to discard the use of such a dangerous anæsthetic altogether. In former times dentists employed chloroform largely; now, however, in view of the many accidents of death, any dental surgeon who would use the drug with fatal result would be indictable for manslaughter. And a surgeon who should do likewise would not be much better off. This seems to be the correct interpretation of public and professional opinion upon the matter. Why, in view of the extensive experience with ether in all our large hospitals, the same opinions do not prevail abroad, it is difficult to understand. No surgeons in the world use chloroform with more care than do those of England, and yet the accounts of death from the anæsthetic are almost frequent enough to be mentioned under the head of regular news. That we do not have frequent deaths from ether, as used in this country, is saying a great deal for the harmlessness of that anæsthetic. It is safe to say that no equally powerful drug is used more frequently and with less care than is this.

THE SOCIAL POSITION OF THE DOCTOR.—Lay testimony concerning the social position of the doctor in England confirms the statement of Dr. Fothergill, that it is a very poor one. The London correspondent of the *Tribune*, commenting upon the matter, tells the following anecdote: "The wife of a fashionable physician living in Mayfair is responsible for this story. She was in want of a cook and resorted to the advertising columns of *The Times*. One of the advertisers to whom she wrote entered the house, it would appear, without noticing the brass plate on the door which here announces the doctor's residence, but heard on her way up stairs into what manner of dwelling she had been beguiled. She sailed into the drawing-room, and, without preface of any sort, delivered her soul thus: 'If you please, mum, I said partickler in my advertisement that I wanted a situation in a *gentleman's* family, and I won't trouble you no further.' And so sailed out again." The worst of it is that, according to the testimony of New York physicians who have often visited London, the social position of the English doctor is low because it deserves to be. He is in most cases the worst kind of a middle-class Philistine.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 26, 1882.

DR. EDWARD C. SEGUIN, PRESIDENT, IN THE CHAIR.

(Continued from page 104.)

DR. PEABODY also presented a specimen, illustrating the following condition:

INTERSTITIAL MYOCARDITIS, WITH COMMENCING ANEURISMAL FORMATIONS, CAUSED BY ENDARTERITIS OBLITERANS.

The heart was removed from the body of a man, fifty-five years of age, who was picked up in a condition of unconsciousness in the street a few weeks ago and taken to the Chambers Street Hospital. He was moribund on his arrival and survived but a few hours. His pupils were normal, there was no paralysis, his temperature was 101° F., and his urine contained a trace of albumen. No account of his previous condition could be obtained.

The autopsy showed, besides the lesions of the heart, a slight amount of diffuse nephritis, together with congestion, œdema, and pigmentation of the lungs. The brain was normal. The endocardium was generally thickened, and the aortic cusps were similarly affected. The chief lesion, however, was in the muscle of the organ. It had been replaced by connective tissue very largely in two places. The most marked change had occurred between the papillary muscle of the mitral valve and the attached border of the aortic valve. Over a nearly circular area there was a distinctly aneurismal bulging of the septum ventricalorum and also of the left border of the left ventrical. The area of the lesion had a diameter of nearly two inches, and the depth of the sac was fully three-quarters of an inch. There was a similar, but less morbid condition near the apex of the ventricle in the septum—at a point where lesion of this kind was not uncommon. The muscular tissue was in the condition known as brown atrophy. In searching for an explanation of this condition, it became necessary to inspect carefully the coronary arteries. At their origin they do not seem abnormal; but inspection of the primary branch that had been laid open revealed to the naked eye a growth from the intima which partially occluded the vessel. There was a point at which the occlusion became complete. The artery feels like a fine cord beneath the finger.

He had examined, also, the peripheral arteries, and exhibited, under the microscope, sections of the radial artery where it could be readily seen that there was a growth of connective tissue from the intima of the vessel. It was not uniformly thick over the entire circumference of the vessel. In addition to this could be seen an enormous hypertrophy of the muscular coat. This condition, known as *endarteritis obliterans*, is described by Heubner as a syphilitic lesion. There is, however, excellent evidence in favor of its being by no means always of syphilitic origin. There was but little doubt that the lesion was aneurism of the heart, caused by interstitial myocarditis, itself the result of endarteritis obliterans.

Dr. Peabody further presented a specimen that illustrated

RUPTURE OF THE AORTA WITHOUT ANEURISM.

The heart was removed from the body of a lady about fifty years of age. She had been for some years an epileptic, and died suddenly without a struggle and without warning.

At the autopsy the only lesion of interest was in the heart and aorta. It was noticed that the area covered by the pericardium was very large, nearly eight inches vertically by six and one-half laterally. The pericardium was found full of clotted blood, which measured just a pint. Both the parietal and visceral pericardium were covered by a thin layer of recent lymph, indicating a recent acute pericarditis. A rupture of the aorta was discovered, a rupture of all its coats, just behind and on a level with the orifice of the innominate artery, nearly circular in shape, and about the size of the innominate artery. The edges were ragged and fresh fibrin adhered to them. He regarded it as the site of an atheromatous ulcer, whose base became so thin that it finally was unable to resist the force of even a feeble heart His views as to its nature were somewhat strengthened by the fact that there were the lesions of atheroma in all its stages in the immediate vicinity, from the stage of fatty degeneration to the stage of the calcareous deposits. The fat layer on the heart was enormously thick, particularly on the right side. The muscular tissue was yellowish, pale, very flabby, and unusually thin in both ventricles. Examined microscopically, the muscle-cells were found to contain a good deal of fat. The valves were all competent.

There was nothing else of interest in the organs, except that the brain was normal, and that the kidneys showed a small amount of diffuse nephritis.

Dr. Janeway suggested that the cerebral hemorrhage in Dr. Peabody's first case might have been due to rupture of an aneurism formed after embolism, an explanation suggested by the condition of the heart.

Dr. Wyatt asked concerning the frequency of the occurrence of bicuspid aortic valve.

Dr. Peabody thought it of rather infrequent occurrence, as he had records of nearly one thousand post-mortems and had found the condition only twice.

The President asked concerning the unique specimen of aneurism of the heart, if there was not a possibility of its being a malformation.

Dr. Peabody said that it might be congenital. He thought, however, that it could hardly be called a congenital auricle, as it had no connection with the circulation except from the left ventricle.

Dr. Janeway believed it fair to assume that it was an aneurism. He had found cardiac aneurism in about the same region. He had also found one which communicated with the pulmonary artery.

Dr. Peabody asked as to the infrequency of the occurrence of cerebral hemorrhage, from any cause, in so young a subject.

The President said it was more rare than at either of the extremes of life. It occurs more frequently before the age of six years than for the next two or three decades. In early childhood its cause is usually mechanical or dyscrasic, and is not due to miliary aneurisms.

Dr. Janeway referred to cases occurring at the ages of ten, sixteen, and seventeen years respectively. He had seen but few specimens, however, between the ages of six and twenty years.

Dr. Heineman referred to a case occurring in a girl twenty years of age.

EXOSTOSIS OF THE HAND.

Dr. R. Newman presented a specimen removed from the palmar aspect of the ring finger of the left hand. It was not attached to the bone, but to the sheath of the tendon, and when removed the tendon was exposed. The top of the growth before removal had a horny appearance, and was covered by only a thin layer of skin. The wound was healing by granulation. The specimen was referred to the Committee on Microscopy.

Dr. Ferguson presented a mounted specimen illustrating

GREENSTICK FRACTURE OF THE HUMERUS AND COMMINUTED FRACTURE OF THE ULNA.

The bones were removed from the arm of a child fifteen months of age, who was run over by a street-car and brought to the New York Hospital July 7, 1881. It lived six days after the accident, but never rallied from the shock. There were extensive lacerations and contusions of the left arm and forearm, exposing the bones at the site of the fractures. The radial artery was intact.

At the autopsy the left elbow-joint contained some blood. One inch of the upper end of the ulna was comminuted. The fracture in the humerus involved about two-thirds of the shaft; its direction was backward and upward, and was about an inch and a half from the lower end of the bone. The internal organs were normal.

The Society then went into executive session.

THE ELEVENTH CONGRESS OF THE GERMAN SURGICAL SOCIETY.

Held in Berlin, May 31 and June 1 and 2, 1882.

Professor Langenbeck, President.

(Continued from page 109.)

Herr Neuber, of Kiel, read a paper upon the

DISINFECTING AND ABSORBENT PROPERTY OF PEAT.

Since September, 1881, all the wounds at Esmarch's clinic had been dressed with iodoform and then covered with a gauze-bag filled with dried turf-mould. This was very absorbent, and generally in a week the wound beneath was healed. Only in a few cases did pus secrete. Dr. Gaffky had found by experiments that the peat contained numerous vegetable organisms. It delayed the activity of bacterial development but did not impair it. The favorable action of the peat is therefore due to its great absorbent powers and its acid reaction, which keep the wound dry and aseptic. Neuber enumerated several other substances having similar properties; such as bran, sand, ashes, especially from paper, sawdust, etc.

Herr Ranke, of Groningen, had used

THYMOL-GAUZE

as a wound-dressing and got as good results as with the typical Lister method. Thymol, however, soon spoils and becomes ineffective unless it is of good quality at first.

Herr Güterbock, of Berlin, related a case of subphrenic echinococcus cured by a rib-resection. For

twenty days after the operation, echinococci were discharged from the wound and by the mouth.

HERR CREDÉ, of Dresden, reported a case of

SUCCESSFUL EXTIRPATION OF THE SPLEEN.

The patient, a man, aged forty-four, was injured by a brick striking the left hypochondrium ten years before. There resulted a cystic swelling of the spleen, which in late years grew rapidly. It was intended at first simply to remove the cyst, which was found to contain a yellowish fluid and to be separated from the spleen pulp by a membrane. The bleeding was so great that this could not be done, however, and the whole organ was removed. Primary healing followed and the man, after about two months' illness, became well. Credé concludes:

First.—That the spleen can be extirpated without injury to health except a temporary anæmia.

Second.—That its extirpation produces a marked temporary anæmia, with increase of white corpuscles as well as decrease of red.

Third.—That there is at first a temporary swelling of the thyroid gland, probably vicarious. The lymphatics and bones were not affected, so far as could be seen.

Fourth.—All these symptoms disappeared in six months.

In the discussion it was shown that there had been fourteen extirpations of the spleen for leucæmic swelling, all fatal; and three extirpations for cystic enlargement, all with favorable results.

HERR HELFERICH, of Munich, reported a case of

MUSCLE TRANSPLANTATION.

He had removed a large fibro-sarcoma from the biceps of a woman, thirty-six years old, and had filled in the space with a piece of fresh muscle from a dog, sewing it in with catgut sutures. Healing took place and the patient can now bend her arm well. The electrical reactions are also normal.

HERR GLUCK, of Berlin, confirmed Helferich's account and referred to experiments of his own, showing that muscle can be transplanted.

HERR SCHEDE read a paper upon "The Treatment of Collie's Fracture," giving preference to ordinary splints over plaster-of-Paris.

HERR BLOCK, of Dantzig, reported his experiments upon "Resection of the Lung." He had removed lobes from the lungs in fifty to sixty healthy and diseased dogs and rabbits. The operation, which could be completed in five to seven minutes, was well borne. Block considers that the operation might be "indicated" in severe hemorrhages, and for the removal of foreign bodies or local disease.

A discussion was opened by HAHN, of Berlin, upon

RESECTION OF THE STOMACH AND INTESTINE.

Hahn, who had found fecal masses impacted in the colon of a case operated upon unsuccessfully, was inclined to refer the unfavorable result to this cause.

BILLROTH thought it unlikely that the intestinal contents should act injuriously upon the wound and sutures. He believed that the pancreatic juice, however, did have an injurious effect. The lips of the wound must be applied very carefully on this account. Billroth was astonished at the number of cases operated upon for resection, since, in his opinion, among fifty or sixty cases of diseased stomach in not more than one case was an operation indicated. He thought the prognosis more favorable in ulcerating stricture than in cancerous stricture. But he doubted whether the dilated stomach could regain its activity.

GUSSENBAUER confirmed Billroth's opinion as to the injurious effect of the pancreatic juice; also his view as to the unfavorable prognosis in cancerous strictures.

E. HAHN, of Berlin, reported three cases of "rhinoplasty." In the first case, a part of the bony arch remained. He simply formed a new septum by taking tissue from the base of the nose and fastened it with several sutures to the vomer. A good septum was thus formed.

The second patient had a completely trough-shaped nose. He raised up the sunken part, made a cut between the eyes, pulled the flaps down, sawed through the nasal bones and fastened them to the part above. In the third case the cartilages were entirely destroyed and the nose was formed from frontal flaps according to Langenbeck's method.

The same surgeon read a paper upon

THE OPERATIVE FIXATION OF WANDERING KIDNEYS.

He made the cut for this operation from the twelfth rib to the crista ilii through the latissimus dorsi and quadratus lumborum, split the fatty capsule of the kidney and made it fast. One patient was completely relieved; the other still complained of severe pains.

In the discussion LANDAU said that he considered the operation a dangerous one, since the fixing the kidney in an abnormal position was likely to interfere with its functioning, especially in women who might become pregnant. He had seen four cases of movable kidney in emaciated phthisical patients.

He had also seen two cases of congenital movable kidney. But here mobility was normal and stability would have been pathological.

KÜSTER said that he had in one case lessened pains by fixing the kidney.

GLÜCK, of Berlin, related the history of a case of

PYÆMIA CURED

by salicylate of soda, which we considered a specific. The patient had taken ten grammes daily, and four hundred grammes in three months.

BEELY, of Berlin, showed some orthopœdic apparatus; GLUCK showed specimens of thoracic and abdominal aneurisms.

KÜSTER showed a case of habitual shoulder-luxation, also two cases of

GUNSHOT WOUND OF THE SKULL,

with healing, the bullet remaining in the cranium. In the first case the wound was small. It was followed by headache, deafness, and convulsions, which soon disappeared. In the second case, the symptoms were severer and disappeared more slowly.

In the discussion, BERGMANN warned against trepanning in small gunshot wounds.

LANGENBECK had seen five cases of penetrating gunshot wounds of the skull, in all of which there was a cure without trepanning. Permanent mental disturbance resulted in only one instance.

BARDELEBEN had seen four similar cases.

JUL. WOLFF read a paper describing favorable results in resection of the elbow and head of the femur.

BUSCH, RIEDINGER, KRASKE, and RIEDEL read papers upon subjects connected with bone-disease and the surgery of the joints. The papers had only a general clinical interest.

ROSENBACH, of Göttingen, reported some note-

worthy cases of laparotomy from the Göttingen clinic, with exhibition of a specimen of pancreas abscess.

UHDE, of Braunschweig, reported a case of laparotomy for the removal of a wooden plug from the descending colon. It had been pushed into the rectum by the patient, a workman, who was suffering from tænia. The plug was 23.3 centimetres long, and was safely removed.

FISCHER, of Strassburg, read a paper upon

THE TREATMENT OF WOUNDS WITH NAPHTHALIN.

Naphthalin is a hydro-carbon ($C_{10}H_8$). It is developed in combustion and to it part of the preservative action of smoke is due. When perfectly pure, as it should be, it is of a yellowish white color. The author has used it upon animals and found no toxic effects. It has but slight effect upon the blood, being absorbed only in minute amount and passing away quickly by the kidneys. Upon wounds it had no irritant effects. It was a powerful parasiticide and had been used in skin diseases by Fürbringer, of Jena, and others. It was an excellent disinfectant. It might be used in scarlatina and diphtheria, as well as in surgery.

The session closed with a paper by LANGENBECK upon

IODOFORM IN THE TREATMENT OF WOUNDS.

The author spoke strongly in favor of iodoform. His practice was to wash the wound with carbolic acid water, insert a drainage-tube, put in the sutures, and cover the whole with wool filled with iodoform. Compress bandages were then applied. The drainage-tubes were removed in three days, and the wound was generally healed in seven days.

The author thought that the iodoform dressing was an essential progress in antiseptic technique. He had used it most successfully in plastic operations.

MIKULICZ, of Vienna, doubted the genuineness of many cases reported as iodoform-poisoning. He thought the symptoms might rather be due to sepsis. Genuine iodoform-poisoning, on the other hand, was frequently due to faulty methods of applying it.

SCHEDE, of Hamburg, blamed the introduction of iodoform for a deterioration in the hygiene of his hospital. Since its introduction, there had been a large amount of erysipelas.

A number of papers were read by title only, owing to lack of time. The following is a list of some of them:

KOLLIKER, of Leipzig, upon "Knee-Joint Resection."

RUPPRECHT, of Dresden, upon "The Operative Treatment of Club-foot in Adults."

BENNO SCHMIDT, of Leipzig, "Statistics of Herniotomy since the Introduction of Antiseptics."

RIEDL, of Aachen, upon "Non-Traumatic Impermeable Stricture of the Urethra."

MICHAEL, of Hamburg, upon "Permanent Tamponnade of the Trachea."

GUSSENBAUER, of Prague, upon "The Operative Treatment of Impermeable Cardia-Stricture."

PILOCARPIN AND AMENORRHŒA.—Dr. McKeown found in one case that pilocarpin given to a healthy girl who had some eye trouble, produced bloody discharges from the vagina. He suggests the possibility of its value in amenorrhœa.—*Dublin Med. Journ.*

NEW YORK SURGICAL SOCIETY.

Stated Meeting, May 23, 1882.

DR. T. M. MARKOE, PRESIDENT, IN THE CHAIR.

DR. CHAS. K. BRIDDON read a paper (see p. 116) entitled,

CASES OF INTESTINAL OBSTRUCTION, WITH REMARKS ON DIAGNOSIS AND TREATMENT.

DR. A. C. POST thought Dr. Briddon had made one statement which should be qualified, namely, "that in acute obstruction of the bowels cathartics can only aggravate the symptoms." It should be modified so as to read, *as a general rule.* He then referred to a case, already reported, when the subject was before the Society at a previous meeting (see p. 443).

DR. BRIDDON asked if any diagnosis was made in that case, with reference to the cause of the obstruction.

DR. POST said that there was not. The obstruction had continued three or four days, and relief came apparently as the result of the administration of the croton oil.

DR. BRIDDON said that he did not wish to qualify his remarks on that question. He believed that a great deal of mischief was done by the administration of cathartics in these cases.

DR. POST agreed with Dr. Briddon fully in that respect, and wished simply to say that there are cases in which, exceptionally, cathartics do not do harm.

DR. BRIDDON thought they should not be given except in cases of fecal impaction.

DR. G. A. PETERS reported a case of

OVARIOTOMY,

in which complete recovery was the result. It was one more case to be added to the list of successes. On account of the extensive adhesions it was regarded by his colleagues as a very unfavorable one for operation. The patient was forty-two years of age, and said that it was only six months since she first noticed the existence of the tumor. The pathologist had reported that it was a malignant growth. The operation was performed antiseptically throughout, union by first intention occurred in the abdominal incision, and there was only one day when the temperature was above 100° F. The pedicle was broad, was tied in three sections with heavy carbolized silk ligatures, and in addition, as there was some hemorrhage from the stump, another loop was passed around the whole of it.

DR. SANDS had suspected, in several instances, that the silk ligature had caused suppuration. He preferred to use silk instead of catgut if it were entirely harmless to the tissues, but as it is commonly prepared it is more likely to excite suppuration than is catgut. Latterly he had been using silk, as if it were catgut, prepared by first boiling the Chinese silk in water for half an hour or an hour, then transferring it to a five per cent. solution of carbolic acid and boiling for an hour, and then placing the ligatures in a two per cent. solution, where they are kept until needed for use. The cohesion of the silk is not impaired by boiling.

DR. WEIR exhibited specimens of the newer ligatures of Lister, prepared according to the method given in the *The Lancet* for March 18, 1882.

ADENOMA OF THE NECK—VENOUS HEMORRHAGE.

DR. POST narrated a case as follows: At his clinic he removed a tumor from the neck of a boy, five years of age. It was situated high up, near the angle of the jaw. The wound was very deep. Cutting instruments were used only upon the surface tissues, and finally the tumor was separated from its attachments; but just as the last detachment was made there was a gush of venous blood which welled up very freely. The hemorrhage came from a point so high up that he was unable to apply compression to the base, and he therefore resorted to the following method—namely, a carbolized sponge was stuffed into the wound so as to make pressure and the wound was sewed up over it. Over the surface a compress and bandage were applied. This was done at two o'clock and at 5 P.M. there had been no hemorrhage. The compress was then removed, and a loose bandage applied. On the next day, at 5 P.M., he removed the sutures and took out the sponge, and introduced carbolized lint. There had been no return of the hemorrhage, and the patient was doing well.

DR. POST also reported a case (see p. 120) as follows:

RAPID LITHOTRITY.

DR. HUTCHISON presented a number of small urinary calculi and calculous detritus removed from a gentleman seventy years old, by aspiration and lithotrity. The patient showed him at his first visit a small boute filled with calculi removed from time to time from the eye of a catheter, which he had been compelled to use for two or three years to evacuate his bladder. He passes no urine except through a soft rubber catheter introduced about once in three hours. This urine contains an abundance of muco-pus and phosphates. His general health is good. A searcher was introduced into the bladder, but Dr. H. was unable to detect calculus; the prostate is greatly enlarged.

May 15, 1882, five days subsequent to the first, he was anæsthetized, and his bladder again searched without result. He then introduced Bigelow's tube, 28 F., and pumped out the specimens shown in the boute, the largest stone being three-eighths of an inch long. When they ceased to fall into the receiver, the searcher was again introduced, and a stone of larger size was detected, too large to pass through the tube. This was crushed by Bigelow's lithotrite, 26° F., and the fragments evacuated. A portion of the outer shell of the last stone is three-fourths of an inch long. The patient's temperature did not rise above 99°, and he recovered without an untoward symptom.

Dr. H. told the patient before the operation that the development of stone was preceded by cystitis, and was the cause and not result of stone, and that he would probably have a relapse unless some radical treatment was adopted to cure the cystitis. He therefore advised him to have external urethrotomy performed after lithotrity, and a perineal fistula established, to allow the urine to run out as fast as it enters the bladder, so as to give it a physiological rest. The patient declined the cutting operation, preferring to take the risk of a second litholapaxy if it should become necessary. Dr. H. said that the special interest of the case was that by means of Bigelow's aspirator he was enabled to bring the calculi out of their "hiding-places," and remove them, when he had been unable to find them with the searcher, showing that the method was sometimes valuable as a means of diagnosis.

DR. WEIR exhibited two calculi,

(1) XANTHIC-OXYD CALCULUS—(2) CYSTIC-OXYD CALCULUS.

The *cystine* calculus weighed 170 grains, and was found in the *kidney* of a man over seventy years of age, who died of prostatic obstruction, hemorrhage from the bladder, with a villous prolongation of the mucous membrane. Since obtaining it he had found records of sixteen cases. At first he thought the specimen was unique.

The *xanthic*-oxyd calculus weighed 43 grains, and came from quite a young person, who had had symptoms of renal colic. After an aggravated attack on the 11th of November, 1881, she was suddenly relieved of pain, and on the 22d of November, the calculus, $\frac{98}{100}$ of an inch long, and one-half inch in diameter was expelled from the urethra. There was nothing in the history of the case to account for the xanthic-cxyd. There are only eight specimens, with this one, in existence.

The Society then proceeded to the transaction of miscellaneous business.

Correspondence.

UNIFORM MEDICAL LEGISLATION.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: I have read with much pleasure the editorial in the RECORD of April 15th regarding "State Examinations for Licences." I had previously read the proceedings of the New York State Medical Society wherein the question was brought up and discussed. The question of legislation for controlling the practice of medicine, in a government like ours, is open to the same objections and obstructions as in the matter of prohibition, or the social evil. In the absence of a strong central power, each State has the entire settlement of all such affairs, and the condition of public sentiment exercises a controlling influence. The result is that action taken in one State is entirely inoperative in the territory of its next neighbor, and the beneficial effects of legislation (if any) are deprived of much of their efficiency. It is also a very serious question whether any individual State law would be of any real service in the State where enacted—however good the law might be—by reason of the manner of the execution of the same. California has had an experience in medical legislation which, I think, all unprejudiced physicians must acknowledge has put the profession on this coast back twenty-five years. The bill provided that the State Medical Society should appoint a medical board of examiners, before whom every person desiring to practise medicine in the State should appear. The *bona fide* possession of a diploma from a recognized medical college entitled the possessor to a licence from the board of examiners, which licence being duly recorded in the county in which the person desired to practise, gave the holder legal right so to do. The bill further provided that prior to a certain date all persons practising without a diploma could appear before the said board of examiners and upon passing a satisfactory examination should be given a similar licence to practise.

All this was well enough in theory, but when it came to the passage of the bill it was found that

there were so many friends of homœopathy and eclecticism in the Legislature that certain compromises had to be accepted, so that the bill as finally passed provided that each State Medical Society should have authority to appoint its board of medical examiners. As a result of this law five boards of examiners came into existence—one of the regular profession, two factions of the homœopaths, one eclectic, and one semi-defunct State Society which was resuscitated by the absolutely irregular element, the venereal advertisers, etc.

It followed as a matter of course that every practitioner in the State, regular or irregular, received a licence to practise, and all were placed on an equal footing before the law. No matter what amendments may follow, the great evil has been done, and nothing but time can remedy it.

There is no question but that the over-crowded condition of the profession, and the almost countless irresponsible schools, adding yearly large numbers to the multitude of doctors, demand sharp and energetic measures for the protection of the profession, as well as of the community at large; for competition has already become so great as to threaten the life of the profession as such, and degrade it to the level of trade and "cheap John" shops.

The action of your own State Society recently in attempting to declare "limits off" in the matter of consultation, although largely in the interest of consultants and specialists, clearly enough indicates the underlying pressure which could allow for a moment the consideration of such questions.

Unquestionably the first thing to be done is to secure a uniform standard of education, and this so high as to at once diminish the supply. Can any one suppose for a moment that the most heroic efforts of a single State in this direction will control the evil? He must be a very sanguine person who thus believes. The regular profession has been so blind to its own interests in the past, that without entering upon any discussion as to the causes, the schools of Homœopathy and Eclecticism have become powers in the land, and in my judgment it would be perfectly futile to endeavor to secure the enactment of any general laws controlling the practice of medicine and medical education in any State in the Union without taking these factors into consideration. How then shall these evils be met? I think I can see two ways, provided the profession will work harmoniously: one by Congressional and State legislation, the other without legislation at all, and this I would consider much the most preferable. The first, in brief, would be to act in concert with the Homœopaths and Eclectics to secure uniform State legislation in every State in the Union, for the appointment of a State board of examiners, which shall examine all candidates for the degree of Doctor of Medicine in the schools of the respective States, in all branches of medicine except Materia Medica and Therapeutics, the students of the different schools being examined in these branches by a supplemental board, in accord with the tenets of such schools. In addition to this State legislation, to have Congressional action for the appointment of a central board of examiners at Washington, which should have general supervision of the entire subject.

At the recent session of the California State Medical Society, a clause of a proposed new medical bill provides that the State Board of Examiners shall be made up of regulars, homœopaths, and eclectics, not for the purpose of examining the students of the schools for degrees, but for the granting of licences to practise. I am strongly opposed to any such amalgamation, and therefore turn gladly to a consideration of my second plan, which is uncomplicated with any connection outside of the broad field of medicine, and requires no legislation. First, let the National Medical Association, in connection with the Medical Corps of the Army and Navy of the United States, appoint a central or national board of medical examiners. Second, let this board, in consultation with the medical schools and State medical societies of each State, appoint a State board of medical examiners for the determination of a standard for the conferring of all degrees. Third, ignore all medical schools and their graduates who decline to agree to such action. Of course much detail has to be considered in carrying out such a plan, but I am convinced it would be practicable, could be quickly enforced, and would more rapidly than any other way shut up three-fourths of the institutions that are now granting medical diplomas. The standard would at once be placed where the community would recognize its value, and all these side issues could be safely left to their own fate.

I remain very respectfully yours, etc.,

A. M. WILDER,

Late Surgeon and Bvt. Lt.-Col. U. S. Vols.: Prof. of Ophthalmology and Otology, Med. Dept. Univ. of Cal.

MICROSCOPICAL APPEARANCE OF GUITEAU'S BRAIN.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—We submit an account of the microscopical appearance of portions of Guiteau's brain. As will be seen, nothing which we can regard as important, bearing upon his mental condition, was found. Further, minute research and description would, we believe, be of interest only as a scientific record of the appearances of a historic organ.

Pieces of brain from the left frontal lobe, the right central convolution, the cerebellum, and a piece of the spinal cord just below the medulla were obtained about five hours after death, and three and a half after the opening of the cranium. These pieces were placed in seventy per cent. alcohol for twenty-four hours then in absolute alcohol until sufficently hard to cut.

Over one hundred sections were made and stained in various fluids, chiefly in Bismarck brown, carmine, and hæmatoxylon. Sections were also stained in osmic acid, aniline blue, Lugol's solution, vesuvin, etc. Other sections were soaked in ether, and in concentrated acetic acid.

These various methods were employed chiefly in order to determine positively the nature of certain peculiar bodies seen under the microscope. They were quite numerous, but were mostly in the white matter. They were generally round in shape, but sometimes appeared in agglutinated masses. They were somewhat translucent, and measured from $\frac{1}{1800}$ to $\frac{1}{300}$ inch in diameter. Some perhaps were smaller. They had the appearance of not being incorporated in the brain-tissue itself. They stained with Bismarck brown, vesuvin, and gave a rose-red color with aniline blue—this being usually considered a reliable test for amyloid matter. But they were not stained with iodine, even after soaking sections twenty-four hours in water to remove the alcohol. They were not dissolved by soaking sections half an

hour in ether and they were not stained by osmic acid. Hence, they were apparently not fat. They were not dissolved in, but were brought out strongly by soaking sections in strong acetic acid, a substance which dissolves colloid matter.

These bodies were found in sections from the frontal lobes, central convolutions, and spinal cord. We saw none in the cerebellum; but only a few sections were made of this part. We regard them as post-mortem products. One of the writers has sections from the spinal cord of a man who died from tetanus which show apparently similar bodies. Certain writers on cerebral pathology have described similar bodies as being "proteinaceous" and as either post-mortem or the result of chronic brain disease. The aniline reaction was very striking, and might perhaps justify an opinion that they are amyloid bodies, though they gave no iodine reaction.

The writers observed occasional thickened blood-vessels in the cortex. No other change of interest was noted. The perivascular spaces, the cells, the nuclei, all presented no abnormalities which we could detect. There were no aneurisms, and no pigmentation. The large motor-cells from the right central convolutions (one of which was small) were abundantly present, and were normal in appearance.

A minute description of the different parts as well as a drawing of some of the sections have been made, but it does not seem worth while to ask your space for their insertion.

Our examinations were made in large part at Prof. Satterthwaite's laboratory, and we are indebted to Drs. W. H. Porter and E. C. Wendt for suggestion and assistance in studying and preparing the sections.

WM. J. MORTON, M.D.
C. L. DANA, M.D.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 16, 1882, to July 22, 1882.

CORSON, J. K., Capt. and Asst.-Surgeon. Relieved from duty in Dept. of Arizona, to proceed to Philadelphia, Pa., and, on arrival, to report by letter to the Surgeon-General. S. O. 164, A. G. O., July 17, 1882.

CARVALLO, C., Capt. and Asst.-Surgeon. Relieved from further duty in Dept. of the Platte, and to report by letter, at the expiration of his present sick leave of absence, to the Surgeon-General. S. O. 164, C. S., A. G. O.

HOPKINS, WM. E., 1st Lieut. and Asst.-Surgeon (recently appointed). To report by letter to the Commanding General, Dept. of the East, for assignment to temporary duty. S. O. 164, C. S., A. G. O.

BARROWS, CHAS. C., 1st Lieut. and Asst. Surgeon (recently appointed). To report in person to Commanding General, Dept. of Arizona, for assignment to duty. S. O. 164, C. S., A. G. O.

MUNDAY, BENJ., 1st Lieut. and Asst.-Surgeon (recently appointed). Assigned to temporary duty at Willet's Point, N. Y. S. O. 164, C. S., A. G. O.

WILSON, GEO. F., 1st Lieut. and Asst.-Surgeon (recently appointed). To report in person to the Commanding General, Dept. of the Columbia, for assignment to duty. S. O. 164, C. S., A. G. O.

OWEN, JR., WM. O., 1st Lieut. and Asst.-Surgeon (recently appointed). To report in person to the Commanding General, Dept. of the Columbia, for assignment to duty. S. O. 164, C. S., A. G. O.

EGAN, PETER R., 1st Lieut. and Asst.-Surgeon (recently appointed). Assigned to temporary duty at the recruiting depot, David's Island, N. Y. S. O. 164, C. S., A. G. O.

WAKEMAN, WM. J., 1st Lieut. and Asst.-Surgeon (recently appointed). Assigned to temporary duty at Columbus Barracks, Ohio. S. O. 165, C. S., A. G. O.

EVERTS, EDWARD, 1st Lieut. and Asst.-Surgeon (recently appointed). To report in person to Commanding General, Dept. of the Columbia, October 1, 1882, for assignment to duty. S. O. 164, C. S., A. G. O.

Medical Items and News.

ALCOHOLIC ANÆSTHESIA.—Dr. L. D. Mason, of Fort Hamilton, in a paper on this subject, describes two forms of alcoholic anæsthesia, one general and temporary, and due to acute poisoning, the other local and more permanent, and the result of prolonged use of the drug. Cases are cited showing the genuinely anæsthetic condition produced in each form.

DR. JUSTIN HAYES.—In a recent notice of Dr. Hayes' treatment of diphtheria, an error was made in the name of the town mentioned. It should have been Shalersville, O., instead of Slatersville.

THE TREATMENT OF CARBUNCLE.—Dr. A. C. Post writes: In my report on the local treatment of carbuncle, on p. 44, I am represented as saying, "Considerable arterial hemorrhage occurred from the edges and bottom of the carbuncle when divided." It should read "Considerable arterial hemorrhage occurred from the edges and bottom of the carbuncle while I was examining it, but after the free incisions were made, the blood soon ceased to flow, apparently in consequence of the relief of tension of the engorged parts afforded by the incisions." You will perceive that the chief interest of the case lay in the fact that the hemorrhage was checked by the incisions, and not produced by them.

THE LATE DR. JAMES R. WOOD.—At the monthly meeting of the Medical Board of the Charity Hospital, for July, held at the Academy of Medicine, the following resolutions were passed:

Whereas, At the end of a long life, devoted to the relief of human suffering and the exaltation of the profession of which he was an honored and devoted member, James Rushmore Wood, M.D., LL.D., a consulting surgeon of this hospital, has been taken away from us; and

Whereas, When such a life is ended, it becomes those who have been associated with, and have profited by his labors, to give official expression to their sense of the great loss they have sustained; therefore,

Resolved, That we, the members of the Medical Board of the Charity Hospital, appreciating his noble and generous character, his unselfish devotion, his large-hearted and open-handed charity for the poor and distressed, and believing that his best

eulogy and most lasting monument will be found in the record of his life, here add our tribute to his memory, our acceptance of the value of his example, and our pride that his name and his labors have a place in the records of our profession, tendering to his family and friends our sympathy in their grief.

Resolved, That these be a part of our minutes, and be forwarded to the widow and the Honorable Board of Commissioners of Charities and Correction.

J. F. Ferguson, M.D.,
Joseph W. Howe, M.D.,
W. M. Chamberlain, M.D.,
} *Committee on Resolutions.*

W. T. White, M. D., *President.*
Edward S. Peck, M.D., *Secretary.*

Consistency.—Dr. Eugene Grissom was elected a vice-president of the American Medical Association at its St. Paul meeting. Dr. Eugene Grissom is a member of the Association of Insane Asylum Superintendents. This association has, besides other homœopathists, as a member, Dr. Selden H. Talcott, Superintendent of the New York State Homœopathic Insane Asylum, President of the State Homœopathic Society. The Judicial Council of the American Medical Association excluded the New York State Medical Society delegates for having a code not in accord with the association. This action was certainly defensible on the ground that until the law of the American Medical Association was changed, all members should comply with it, but then how much consistency is there in electing as vice-president one who is a member of a medical association which admits homœopathists, and thus conflicts with the association's code.—*Chicago Med. Review.*

Nothnagel has been chosen to succeed the late Professor Duchek.

Vogt has been called to the Surgical Chair in Greifswald, in place of the late Professor Hueter.

Carbolic Acid Treatment of Piles.—Dr. H. Z. Gill, in a monthly report of the Southern Illinois Penitentiary, says: "There have been more than a dozen cases of piles treated by carbolic acid hypodermic injections. Many of them were of years' standing, and they now, even the worst, declare themselves entirely cured. The amount of acid injected was from five to ten minims, dependent upon the size of the tumor. The acid used was the crystallized, with just enough glycerin to hold it in solution. The operation was made slowly, and the needle slowly withdrawn. The course has been mild in most cases, and the results have been entirely satisfactory."

Dr. Chiari has been called from Vienna to the Chair of Pathological Anatomy at Prague left vacant by Klebs.

The Third Centennial Jubilee of the University of Wurtzburg will be celebrated on August 1, 1882.

Koch's discovery of the tubercle bacillus has excited the interest of the German Emperor, who has asked to have specimens shown him.

The Tenth German Medical Congress met in Berlin, June 30th, July 1st and 2d.

Pilocarpine in Detachment of the Retina.—Dr. Eugene Smith, in his report of the Eye and Ear Department of St. Mary's Hospital, Detroit, says: "During the past year I have had opportunity to test the use of pilocarpine or jaborandi in five cases of *detachment of the retina*. Success has followed its use in three cases, and slight improvement in two, and we have at last found a remedy for many cases of what was till recently considered an incurable condition."

The Living Skeleton, exhibited for some time past in a museum in this city, died recently. He was found to have had phthisis, and was not so very thin after all. He weighed one hundred and six pounds, instead of fifty, as advertised.

Prosecuting Irregular Practitioners. — The County Medical Society has brought suit against another alleged quack, Dr. W. C. Harbison.

Syrup of Bromide of Chloral is a successful pharmaceutical preparation. A fluid drachm contains five grains of the compound. This five grains contain nine parts of chloral to one of pure bromine.

A Good Departure.—In London has been founded a national society for the suppression of juvenile smoking. One of the leaders in the movement is Dr. Benjamin Ward Richardson. Letters in approval of the society's aims were read at the first meeting from the Earl of Aberdeen, Mr. Samuel Morley, and others. Dr. Richardson said the use of tobacco by the young was a grave and increasing evil, and that the effects of it on them were destructive both to mind and body. He was convinced that the need for the society was large and real.

Is the Strawberry a Dangerous Fruit?—The Hon. Frank Fuller, at a recent meeting of the newly organized National Sanitary Association, denounced the strawberry as unhealthy and dangerous. He claimed that the seeds were liable to irritate the bowels, and especially to get into the appendix and cause typhlitis. The charge was not substantiated by any facts, and we doubt if medical experience will sustain it. The *Times*, commenting upon this matter, says: "The Hon. Frank Fuller could not think of deriding the colicky gooseberry, or the seedy and deceptive blackberry, or even the suspicious and unbuttered watermelon. Slander loves a shining mark. The summer sanitary philosopher selected the paragon of small fruits to be maligned as parent of serious forms of intestinal lesion and the creator of fistulous openings. The Hon. F. F. thinks to achieve eminence as did the youth who fired the Ephesian dome. But the strawberry will bless the world long after the fame of this midsummer maunderer has perished."

Dry Treatment of Mucous Membranes.—At a recent meeting of the St. Louis Medico-Chirurgical Society, the dry treatment of mucous membranes was much advocated. It consisted in blowing borax, bismuth, iodoform, or astringent powders upon such membranes as could be reached. Or in the case of the vagina or rectum, in introducing hollow suppositories containing the proper kind and amount of powder.—*St. Louis Courier of Med.*

Insanity and Responsibility.—A man can be insane and yet can make a valid contract, a valid will, can do his regular business, providing his insanity or delusion of whatever form does not interfere. Vice and insanity, disease and health, may be commingled, but when any man known to be insane commits a great crime the presumption is that that

crime is, in whole or in part, the result of the insanity. When a noted criminal becomes insane, his subsequent acts are far more the result of his insanity than his evil disposition. For vice is a pigmy, but lunacy is a giant. Vice drags a man down, but lunacy makes a child of him—makes a brute of him—makes a demon of him. So well is this understood that it would generally be impossible to convict an insane criminal. The highest penalty of responsible crime ought not to be inflicted on a man known to be insane, even if he be naturally vicious. —*Beard.*

Constipation in Infants.—The following are some of the remedies found useful by Dr. D. H. Cullimore (London *Lancet*): 1. A pellet of butter and brown sugar or treacle every morning fasting, or a little raspberry jam. 2. The morning insertion into the rectum of a conical piece of white curd soap about two inches and a half long. It must be first dipped in warm water, held *in situ* for five minutes, and withdrawn. 3. Daily friction over the body, from the right iliac region along the course of the gut, with a salad oil. In India I have used cocoanut oil advantageously. Cod-liver oil is very useful when its smell is not objected to. Assiduous friction without any unguent is often useful. Patience, however, is necessary. A teaspoonful of fluid magnesia in the food is a good plan. Tomato jelly is sometimes used in India with benefit. Whatever plan may be adopted it is well to supplement it with the internal administration of half a drop of tincture of nux vomica three times a day; a quarter of a drop is sometimes sufficient. Minute doses of sulphur also answer well.

The Skull of Kant.—Kupffer and Bessel give a description of the skull of the philosopher Kant, which is summarized in the *Journal of Neurol. and Psychiatry*. The brain exhibited the frontal suture, which has ordinarily, though with no good reason, been held to be a sign of low development. Kant was only a little over five feet high, and of delicate frame, yet his cranial capacity was 1,740 cubic centimetres. Only two and a half per cent. of the German race, which is said to have the greatest cranial capacity, exceed 1,700 cubic centimetres. The head was long, the forehead not very broad. The most remarkable feature was the disproportionately great development of the upper fossa of the occiput, which receives part of the occipital lobe. In the average skull the occipital fossa is to the cerebellar as 1:1 or 3:2; in Kant's skull, however, the proportion was 2:1. Kant had, therefore, a voluminous brain, with relatively small frontal lobes and cerebellum.

Dry Treatment of Caries.—Dr. Engelmann (*St. Louis Courier of Medicine*) describes a number of cases of caries treated simply with cotton, in the children's hospital in Paris some ten years ago. The method of treatment resorted to for years, and for which they claimed absolutely perfect results, was to bandage the entire limb very thickly in cotton, which being once put on was not removed for six months, perhaps, and when it was removed the once foul suppurating wound had completely healed.

Application of the Cold Douche in Blennorrhœa Neonatorum Complicata.—Dr. O. Paulsen, of Hamburg, describes (*Berlin Klinisch. Wochenschrift*) the troubles attending the treatment of severe cases of ophthalmia in infants. The very rapid secretion of pus and the spasmodic closing of the lids are the factors which especially make it difficult to treat these cases satisfactorily. Dr. Paulsen thinks that the cold douche remedies these difficulties, however. In severe cases this must be repeated every ten or fifteen minutes, then every half hour or hour, each application lasting two or three minutes. It is surprising, says Dr. Paulsen, to see how quickly the tension of the lids relaxes and the conjunctivæ become visible.

Dr. Samuel Sexton has been elected a Life Member of the New York Institution for the Instruction of the Deaf and Dumb.

The Taliacotian Operation.—Mr. Wm. Stokes, of Dublin, recently performed successfully the Taliacotian operation upon a young man, who had accidentally had a large part of the nose shot away.—*Dublin Med. Journal.*

The Cartwright Prize of $500, of the Alumni Association of the College of Physicians and Surgeons, New York City, will be awarded in May, 1883, to the best medical essay, the subject to be selected by the writer. This prize is open to universal competition, and the conditions of its award are that the essays presented must contain the results of original investigations made by the writer, and be handed in to a member of the Prize Committee on or before April 1, 1882. The committee consists of Drs. Weir, Seguin, and Partridge.

Humanized Virus.—Dr. F. H. Darby, of Morrow, Ohio, believes that humanized virus of two, three, or even four removes is the best. The objection of slowness put forward against the humanizing method he does not consider as of any weight in the practice of the active physician. The liability of disseminating syphilitis and other diseases is *nil*, at least in rural districts where family histories can be traced back for ages by the doctor. Owing to the gradual deterioration of virus propagated by the humanizing process, arm to arm vaccination should not be exclusively relied upon; but neither would it be proper to pin one's faith to bovine virus alone. The mean, then—an occasional reversion to the cow—is the course to pursue. Bovine virus is exceedingly prone to deteriorate in short time. Spreading it in thin layers is no doubt the secret of the lack of success so commonly complained of.

Medical Practice on the Frontier.—Dr. R. C. Newton, U.S.A., of Fort Cummings, New Mexico, sends us the following account of frontier medical practice:

"About a hundred miles north of here, there is a mining camp called Fairview. This place boasts an individual who keeps a saloon and restaurant, and at the same time practises *medicine and dentistry* extensively throughout the Black Hills mining district. The legends on his sign, 'Dock's Saloon' and 'Meals at all hours,' give all desired information. The former is pregnant with meaning, as it is the doctor's shingle and the saloon-keeper's sign combined. 'Dock's' businesses are well advertised in various adjoining towns, or camps as they are here called, by signboards reading 'Go to Dock's, Fairview, for a square meal.'

"One of the frequenters of this saloon, a friend as well as a patient of its illustrious proprietor, from too liberal use of 'Dock's' peculiar brand of whiskey was overtaken by a severe stroke of paralysis. 'Dock,' who had really been chiefly instrumental in bringing on this attack, was at once summoned as medical adviser. He pronounced the case hopeless, and *recommended a strong dose of strychnine*,

which would, he said, put the patient out of his sufferings.

"He was persuaded not to adopt so heroic a course of treatment, and was led to call in consultation another medical light from the neighboring town of Robinson. This town exists principally upon paper. However, its medical man came and recommended the administration of some form of mercury in an enema, as the best method of treatment. They refused an offer of a bed made by a friend of humanity, who found the poor patient lying upon the dirt floor on a few blankets, saying in effect that it was not worth while to bring the bed, as the patient would not live until morning.

"The gentleman becoming much disgusted with the proceedings, and having persuaded an old miner to join him, visited the sick man, threw away all his medicines, put the nurse under the strictest orders (which mean something in a mining camp) not to administer another particle of 'Dock's' medicine, and gave the paralytic a dose of castor-oil, the need for which was very apparent.

"This interference was followed by the happiest results. The unfortunate man, who was apparently at the point of death, soon began to improve: he regained his intelligence, and some power over his limbs, although he is still partly aphonic. He could soon take exercise in a cart, and seemed to be doing well in every way.

"'Dock' boasted very boldly of the recovery as entirely due to his skill, asserting that he knew that if the patient could only retain the remedies prescribed recovery was certain. Apparently fully convinced of the beneficent effect of his medicines, and particularly of his whiskey (the vileness of which I have already hinted at), 'Dock' persuaded the nurse to bring the patient daily to his saloon to imbibe the stimulant in excess, and finally, by his seductive manner, he got the patient to remain for several days at the saloon. This course led the miners, in order to save their unfortunate comrade's life, to club together and send him to the hospital at Santa Fé.

"It is much to the credit of the miners, most of whom are not yet rich, that they contributed liberally to support the sick man after his rescue from this medical phenomenon."

A Peculiarly old Surgical Operation.—Dr. Wm. S. Forbes, of Philadelphia, recently cut the accessory tendons of the extensor tendon of the ring finger. The operation was performed upon a pianist, and enabled him to play much better. The operation was a success, but it is not new or peculiar. As a rule, it does not add to the strength and mobility of the finger.

Iodoform and Listerism.—Professor Lister has recently been making some trials of iodoform and is using it considerably, according to the *British Medical Journal*, in his dressings. Like others, he finds it more convenient than other ordinary antiseptics for the treatment of local sores, for introducing into chronic sinuses or into scrofulous joints after incision; but it is not easy of application to an amputation or to most other operation wounds; and is quite unsuitable for use with the spray. For this reason Professor Lister still operates under the carbolic acid spray, though he now seems to attach rather less importance to its continuous use, and will stop it, for instance, for a short time during an operation if the cloud it produces be found to interfere with a clear view of the wound. The dressings used consist of cotton-wool impregnated with iodoform, and the drug itself is, in certain cases, powdered over the wound from a sprinkling-box. "Iodoform wool" has also been extensively used at University College Hospital. The great difficulty encountered in preparing the wool is to obtain an even distribution of the iodoform. The desired end is best obtained by treating the powdered drug with ether, in the proportion of about eighty-eight parts of ether to eight of iodoform. In about four pints of this mixture, half a pound of fine, clean cotton-wool is soaked for a short time; the wool is afterward placed in a drug-press. About three pints of ether can be squeezed out, and, when dry, the wool contains about ten per cent. of iodoform. The same objection is made against this wool as against salicylic wool—namely, that its use spreads about the room an irritating dust, with this further disadvantage, that the odor is to most people very offensive. A little glycerine added to the ether used in its preparation, checks the former tendency, and the latter drawback is minimized by the addition of eucalyptus oil. The wool ought to be stored in air-tight boxes, and not handled more than necessary before use.

A Bogus Medical College.—At a meeting of the Jasper County Medical Society, held in Carthage, Mo., on Tuesday, April 4, 1882, the following preamble and resolution were unanimously passed:

Whereas, The Jasper County Medical Society, having been credibly informed that a so-called Joplin College of Physicians and Surgeons has been issuing diplomas to various persons without a proper course of practical anatomy, and so varying from the established rules of reputable colleges as to bring discredit and ridicule upon the good standing of the profession generally; and

Whereas, We are also credibly informed that the institution above mentioned has no legal existence, and its graduates are liable to indictment for practising medicine contrary to law in Missouri; therefore be it

Resolved, By the Jasper County Medical Society in regular convention assembled: That we will not fraternize with any of the professors or graduates of this so-called Joplin College of Physicians and Surgeons until they have complied with the rules of *regular* medical colleges in good standing.

Bovine Vaccination.—Dr. Samuel C. Benedict, of Athens, Ga., writes: "The sayings of 'Speculum,' in issue of May 27 of your valuable journal, accord in so many respects with the opinions formed from my own experience that I wish to add my 'Yes' to them.

"Since February 1st I have vaccinated with *points* about four hundred person. Nearly all of these points have been obtained from Petit's farm, at Cleveland, Ohio, and have proved more satisfactory than those from other farms.

"The percentage of good results with these points has been about 80. Quite frequently some one of those upon whom a point had been used has shown a raspberry sore, *not* a true vaccine sore. This was in every instance the case in a lot of Petit's points obtained four weeks ago, and used within a week after receiving them. This result, of course, is very unsatisfactory, for what protection is there to a person with such a sore, one which many may think a good result and expose themselves, feeling safe. These raspberry sores are due to what? I have seen them in children having no signs of pre-

vious vaccination. What produces such results? About the same time that the last lot of points were used I was requested to vaccinate the hands working on a railroad extension. The virus used in these cases was a scab from a healthy arm, which scab was made from a point. Out of forty-seven vaccinations thus made, *forty-four* have proved successful, the results being very satisfactory indeed. All of the forty-four have shown a polyvesicular sore, enlargement of axillary glands, and, in most, marked constitutional symptoms. From the experience I have had with points, and with scabs *once removed* from the bovine virus, and the results I have seen in the good hands of others, I would to-day unhesitatingly use such a crust in preference to points if the urgency for a successful vaccination at first trial demanded it. I like to use the points; they are convenient, neat, and efficient, as a rule, *when fresh*, but this very uncertainty as to their age and purity, even from the best producers, is an objection; and consequently a well-selected, well-pulverized scab, 'once removed,' seems to me safer, because *surer*."

THE PHYSIOLOGIST'S NIGHTMARE.

By E. C., M.D.

POET LAUREATE OF THE ROMAN MEDICAL SOCIETY.

Once upon a midnight dreary, while I labored, weak and weary,
Ever delving after knowledge new in biologic lore—
While I nodded, nearly napping, suddenly there came a tapping,
As of some one gently rapping at my laboratory door.
"'Tis some student there," I muttered, "at my laboratory door—
Only this and nothing more."

Open here I flung the shutter, when, too dread for lips to utter,
In there stalked a ghostly likeness of a form I'd seen before:
Not the least obeisance made he; not a minute stopped or stayed he;
But with mien of lord or lady posed himself before my door:—
By the pallid dusty panels of my laboratory door
Posed and looked, and nothing more.

Then this gloomy thing beguiling all my keen wit into smiling,
By the woe-begone expression of the countenance it wore,
"By thy chin all shorn and shaven, thou," I said, "dost look a craven
Ghastly grim resemblance graven of a form I've known afore—
Tell me what thy fateful name is, if 't be one I've known afore!"
Quoth the Spectre, "Bergh, be gorr!"

And the Spectre, leaning lonely 'gainst the panelled door, spoke only
That one phrase, as if his soul in that one phrase he did outpour.
Nothing farther then he uttered, not a syllable he muttered—
Till, a little bored, I spluttered, "Other bores have gone before—
On the morrow *he* will leave me, just as bores have done before."
Then the thing said, "Nevermore."

Then, methought, the air grew denser, and the Spectre's wrinkles tenser
As he tapped his toes exultingly upon the sanded floor.
"Wretch," I cried, "whoever sent thee, let this beer-mug now content thee,
Quaff, oh, quaff the malt nepenthe, and be jolly, I implore—
Quaff the foaming malt nepenthe, and be jolly, I implore!"
Quoth the Spectre, "Nevermore!"

"Nuisance," said I, "thing of evil!—nuisance still, if Bergh or devil!—
By the charnel-room above us, by the lecture-hall before,
Tell this soul in deep dejection, if, on serious reflection,
You'll permit of vivisection, if we do it without gore—
Let us practise vivisection, if no agony or gore!"
Quoth the Spectre, "Nevermore!"

"Nuisance," said I, "thing of evil!—nuisance still, if Bergh or devil!—
Surely, though, the boon of Jenner you will hardly dare ignore.
Your humanity addressing, then I pray you, acquiescing,
Grant, oh, grant us still the blessing of the Vaccinating Corps—
Grant surcease of Death's foul horror by the Vaccinating Corps!"
Quoth the Spectre, "Nevermore!"

"Be that word our sign of parting, Bergh or fiend!" I shrieked, upstarting,
"Get thee back into the bigotry of Night's Plutonian Shore!
Leave no horse-hair as a token of the curse thy soul has spoken!
Leave my loneliness unbroken!—get thee gone from off my door!
Take thy cant from out my heart, and take thy form from off my door!"
Quoth the Spectre, "Nevermore!"

And the Spectre, truth defying, still is lying, still is lying
On the subject of the blessings wrought by biologic lore:
And his eyes have all the gleaming of a madman's that is dreaming,
And the gas-light o'er him streaming throws his shadow on the floor,
And the buds of knowledge blighted by that shadow on the floor,
Shall they blossom—any more?

The Influence of the Central Nervous System on the Regulation of the Animal Heat.—A. Bókay (*Pester Mediz.-Chirurg. Presse*), on the ground of certain experiments upon dogs, concludes (1) that there are certain cortical centres, irritation of which causes a rise in the temperature of the body; (2) that these centres are in the anterior and upper parts of the central convolutions; (3) that certain parts of this area cause, on irritation, local rises in temperature, and that there are three temperature centres for the front and hind limbs, etc.; (4) that there are also heat-inhibiting centres; (5) that the vaso-dilator system interposes in this increase of temperature.

These conclusions verify, to a certain extent, Wood's experiment. The conclusions are much broader, however, and not so carefully substantiated.

Death by Chloroform.—A case of death by chloroform recently occurred in the practice of Dr. Kinlock, of Charleston, S. C. The patient was a young lady of wealth and high social position, who was suffering from some uterine trouble. It was necessary that a slight operation should be performed, and chloroform was given. Death occurred almost as soon as anæsthesia was produced. Dr. Kinlock enjoys a high reputation as a physician, and there is every reason to suppose that the anæsthetic was carefully given.

Interesting to Doctors.—The New York State Undertakers' Association was formed at Utica in 1880, and recently held its third annual convention at Rochester. A full report of this affair, as well as an account of the proceedings of the National Convention of Undertakers, held at Rochester at the same time, the delegates representing eighteen States, is printed in the *American Undertaker*, a weekly newspaper of handsome appearance, which

is published in this city. The same journal contains an article upon an interesting contest of skill that is to be held in New York during the summer. This will be nothing less important than an embalming match, in which the relative merits of various processes of preserving dead bodies are to be tested.

CHARCOT'S METHOD OF GIVING BROMIDES.—In an item in THE RECORD of July 1st, under this head, the doses were given in grains instead of grammes.

LEIDY MEMORIAL.—Several prominent Philadelphians are seeking to raise a testimonial fund of $100,000 for Dr. Joseph Leidy, of the University of Pennsylvania, designing that at his death it shall be applied to the maintenance of a Leidy Chair of Anatomy at the University.

LAVERAN'S MALARIA PARASITE has attracted the public attention, and called forth editorials in our daily press. The criticisms upon the alleged discovery by Dr. Corr should, therefore, be noticed. Dr. Corr expresses strong doubts as to the parasitic nature of these bodies which Laveran has considered to be the germ of malaria, and which he found in the blood of persons suffering from that disease. He (Corr) shows that the forms observed by Laveran occur only in the actual forms of malarial fever, in which Hayem has pointed out that the red corpuscles are diminished in number, and decomposition products appear in the blood, and is disposed to agree with Kelsch in considering Laveran's parasite to be merely pigmented corpuscles, due to retrograde metamorphosis.

CALCIUM SULPHIDE IN SMALL-POX.—Dr. R. H. Cowan, of Richmond, Va., writes: "Since reading in a recent number of THE RECORD a report read before the New York County Society on the use of calcium sulphide as an antisuppurative, the administration of this drug in small-pox has strongly suggested itself to my mind. As our means of combating this fearful disease are so limited, and the results of treatment so poor, it seems to me that calcium sulphide would be worthy a trial."

THE DANGER OF ADMINISTERING LARGE DOSES OF MORPHINE IN NEPHRITIC COLIC.—Dr. John A. McKennon, of Selma, Ala., sends us the following item: "Permit me to relate a case which to me was extremely interesting. On the night of March 15th I was called to see Mr. G. A——, suffering from nephritic colic. His history was that he had had several attacks, coming on about once in two months. His agony was so great that when I saw him first he was unable to remain in bed or room, but was walking on the roof of a two-story verandah (his room was on the third floor). On seeing his condition, I immediately gave him a hypodermic injection of morphia, one-fourth of a grain, put him in a hot bath, and gave him by inhalation (Squibb's) chloroform. After persisting in this course for half an hour, he begged me constantly for more morphine. I put him to bed and gave him one-fourth of a grain of morphine by mouth, and a warm hop poultice with some digitalis leaves over kidney where he complained of pain; his pain radiated down to penis, scrotum, and thigh, no relief being given after half an hour of this treatment (I would say here he was inhaling persistently the chloroform cautiously given). After twenty minutes more I gave one-sixth of a grain of morphia with one-fiftieth of a grain of atropia hypodermically. I was absent from the room about ten minutes, when I was summoned to come in haste from an adjoining room. To my astonishment and horror my patient was apparently dead — pulseless and gasping for breath, completely narcotized. After faithful work for about two hours, my patient recognized and spoke to me. You can imagine my relief. I will say here, when I left him with his friend and companion for the ten minutes, he was on the roof walking as I found him when first called. I can only account for this sudden transition in his case to the calculus passing out of the ureter into bladder. The sudden relief from pain caused the narcotics given to have the greatly increased effect. In resuscitating him, I found pressure, made heavily over the region of kidney and ureters, caused him to wince; this was the first evidence of returning vitality, and I think materially aided me in bringing back my patient to life, which was so near extinct. I write this to put the profession again on guard in the use of narcotics for the relief of great pain, especially when used hypodermically, when the pathological condition may subside so suddenly by natural processes."

PETROLEUM IN PHTHISIS. Dr. M. Milton, of Bradford, Pa., writes: "An article of mine, published in THE RECORD, May 13, 1882, on the use of petroleum mass in consumption, etc., has brought me many letters requesting my formula for petroleum pills. The following is my usual formula in phthisis:

℞. Petroleum mass ..... ʒ j.
Pulv. Cubeba,
Pulv. ipecac comp ..... aa ʒ ss.
Sulph. cinchonidia ..... ʒ j.

"Mix, make four-grain pills. Sig. one pill every three or four hours, or when the cough is troublesome. Also used in chronic bronchitis, asthma, catarrh, and all obscure lung troubles.

"The following ointment has never disappointed me in that troublesome of all diseases, pruritis ani:

℞. Petroleum mass,
Citrine ointment..... aa ss.
Bismuth subnitras..... grs. xxx.

"Apply locally, night and morning."

IRON IN CAPSULES.—Dr. A. W. Parsons, of Brainerd, Minn., writes: "I would like to suggest, for the possible benefit of some of your many readers, a method for administering tr. ferri chloridi, by which it does not corrode the teeth or prove a disagreeable dose for the patient. I have used it for some time, with none but the best results. When writing for the quantity of the tincture desired, write for a corresponding number of empty jujube capsules, and direct the patient to take one, fill it from the bottle, swallowing it with a drink of water. A Planten's No. 1 capsule will hold ten minims of fluid. There is no danger that the capsule will dissolve before it can be swallowed, as I have had them filled one day and taken the day following. Many other disagreeable tasting medicines might also be thus administered.

SCIENTIFIC PROGRESS.—According to Mexican journals, the President of the republic has ordered to be paid to Señorita Matilde P. Montayo a monthly pension of thirty dollars. This is to aid the young lady in pursuing the study of medicine, for which she has evinced great aptitude. She is studying at Puebla. We heartily applaud this sign of progress. —*Cronica Med.-Quir.*

Original Communications.

ON THE TREATMENT OF STRICTURE OF THE RECTUM.[1]

By CHARLES B. KELSEY, M.D.,

SURGEON TO ST. PAUL'S INFIRMARY FOR DISEASES OF THE RECTUM; CONSULTING SURGEON FOR DISEASES OF THE RECTUM TO THE HARLEM HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, ETC.

The treatment of stricture of the rectum is both constitutional and local, medicinal and operative. The first question to be considered is as to the advisability of anti-syphilitic treatment. In recent cases where syphilis is to be suspected, this should never be omitted. It is well to exercise great caution in this matter, however, and the cases in which the patient should be submitted to this form of treatment should be carefully selected. The practitioner who considers the majority of strictures as syphilitic, and indiscriminately uses mercury and iodide of potash, will be mistaken about as often as he who looks upon most of his cases as cancerous, and therefore incurable. The general condition of a patient with severe rectal disease is never up to normal, and an unnecessary course of medication will do harm rather than good.

Cicatricial tissue, though the result of specific disease, is beyond the reach of specific treatment; but where the case can be seen early enough, much may be gained by a thorough course of mixed treatment, and a gummatous deposit or a syphilitic sclerosis may be checked. Mercury and iodide of potash should both be given, and neither should be relied upon alone. Mercury in the form of ointment or oleate may also be administered by the rectum, and the full constitutional effect of the drug may be gained in a very short time by this method of administration. It is, however, an irritating application, and in cases of much ulceration and sensitiveness it may not be well borne.

There are various means by which the comfort of these sufferers may be greatly increased without recourse to operative treatment; and since in many cases the surgeon is limited to these means in his efforts to do good, it is well that they should receive careful attention. The most effectual of them all is a careful regulation of the diet, combined with rest, and with the administration of laxatives if occasion requires. The diet should be fluid and preferably milk. If milk is complained of soup may be substituted. A certain amount of farinaceous food may also be allowed, such as toast, crackers, and mush; but milk is the basis of the diet, and the other things are only intended to make that diet endurable. Many patients will assert from the outset that they cannot take milk, but nearly all can take it, and considerable quantities of it daily, for an indefinite period, if a little care is exercised in its administration.

The bowels should move once daily, and, if possible, without straining. Should any medication be necessary to secure this daily evacuation, it should be of the mildest kind. A little mineral water in the morning, a small quantity of rochelle salts or of the compound licorice powder, will answer every purpose. Where the opposite condition obtains, and the patient is troubled with diarrhœa and tenesmus, which result from the ulceration associated with the stricture, there is nothing better than bismuth and morphia—a good deal of the former combined with a very little of the latter. Purgatives are always contraindicated, because they cause straining and tenesmus, increase the conjestion and its consequences, and because, where obstruction exists or is threatening, they may do great harm by exciting a violent peristaltic action in an already weakened and ulcerated bowel.

Of rest as a therapeutic measure we have already spoken under the treatment of ulceration. The general strength of these patients is to be supported in every possible way; and in all of them, where it can be borne, cod liver oil will be found to answer a double purpose of tonic and laxative. When obstruction actually exists, much may be done in the way of general treatment before resorting to operation. Food should be almost absolutely suspended; opium should be given in large doses to allay the peristaltic action of the intestine, and large poultices covering the abdomen will be found to give great relief to the suffering. Dr. Norman Kerr has derived great benefit from the administration of the extract of belladonna in doses of one or two grains at short intervals in this condition; but the *rationale* of its operation is not understood. No purgatives should be administered, and the bowel should not be tapped with the aspirator. The dangers of this measure have already been pointed out.

By these means, combined possibly with gentle dilatation, the life of a patient may be prolonged in comfort. I have often been agreeably surprised at the happy results of such measures, where operative interference was either declined or contraindicated; and they can never be dispensed with though an operation be performed.

Dilatation.—This may be either gradual or sudden, partial or complete.

The use of bougies for gradual dilatation is an example of a good practice originating in false ideas. It was first practised with the idea of destroying the stricture by the action of medicinal substances applied in this way. Experience soon proved that simple bougies were not less efficacious than medicated ones, and the improvement was then supposed to be due merely to the mechanical stretching of the contraction. Instruments were therefore introduced as often, and allowed to remain in as long as possible—an idea in practice not yet entirely eradicated. But as Syme[1] pointed out, "it is the effusion of organizable matter in the cellular texture of the part which causes the stricture, and it is the absorption of this deposit that removes the disease. The bougie by its presence excites the action of absorption, and if the pressure be too great, too long continued, or too frequently repeated, there will be a great risk of causing more than sufficient irritation for the purpose, and of inducing again the very condition it is desired to counteract, the consequences of which must be a confirmation and increase of the disease."

The rules which should guide the surgeon in the treatment by gradual dilatation are now well understood and generally admitted. The dilatation should be intermittent and not constant. Attempts at constant dilatation, by means of bougies of any

[1] Advance sheets from the author's work on Diseases of the Rectum and Anus, to be published in Wood's Library of Standard Medical Authors for 1882.

[1] Diseases of the Rectum, p. 120. Edinburgh, 1838.

sort which shall remain permanently in place, generally result either in failure or actual disaster. They are not well borne by the patient, and when their use is persisted in, despite the protest which nature is pretty sure to make, the rectum becomes irritable, suffering is greatly increased, and there is decided risk of peritonitis and cellulitis.

The dilatation should never be forced. A bougie should be chosen which will readily pass the obstruction without stretching, and if there be any doubt in the operator's mind as to the proper size of the instrument, let one be selected which is too small rather than too large. An instrument should seldom be passed oftener than every alternate day, and once a week may be often enough. Little is gained by allowing it to rest for any length of time within the constriction.

Practised in this way much good may be done by this treatment. The patient may be greatly relieved and rendered very comfortable, but it must be continued indefinitely. For this reason, I suppose, it is not unfrequently used under false pretences in cases of hypothetical disease in hypochondriacal patients, and most of the reported cases of cure will be found reported by the laity. It has happened to me more than once not to be able to find any stricture after a patient had submitted to a long course of supposed dilatation, and there is but one way of convincing the patient under such circumstances. It consists simply in passing a full-sized instrument its whole length into the bowel.

This treatment by gradual dilatation, perhaps on account of the recent great advances which have been made in the treatment of stricture, has, to a certain extent, been superseded by more radical measures. It is not long since a well-written article on "Rectotomy" in one of our periodicals was begun by the statement that the treatment of stricture by dilatation was acknowledged to be a failure. This is by no means the case. The measure may not be curative, but it is perhaps as valuable a palliative as is at the command of the surgeon. It need not always be done with a bougie, for the patient's own finger, or that of a careful nurse, is often better than any instrument. It is applicable to all strictures, malignant or benign, which are within reach of the anus. When the disease is high up, it is not free from danger, and can scarcely be recommended on account of the uncertainty and difficulty of its application.

Divulsion.—The practice of forcible and sudden dilatation, or divulsion, is founded on entirely different principles, and is intended to overcome the constriction at a single sitting by means more or less violent. These consist of bougies of various kinds and sizes, generally made of metal; of dilators of many varieties and different degrees of power, or simply in tearing open the stricture with the fingers. More recently advantage has been taken of fluid pressure, and an instrument has been invented by Wales.

Of all the instruments for this purpose this is perhaps the best. There are now several cases on record where forcible dilatation with the fingers, either with or without previous nicking with a knife, has been followed by immediate relief to obstruction and fecal accumulation.[1]

This method has but few upholders, because it has been found to possess no advantages over more gradual dilatation, and to be in itself by no means devoid of danger. The dangers are hemorrhage, laceration and rupture of the bowel, peritonitis, and abscess. The relief obtained is not permanent, and the operation involves the subsequent use of gradual dilatation to preserve the calibre gained. Even when applied to the lower three inches of the bowel, the operation is rough, uncertain, and unsurgical; and above this point it is scarcely admissible. Nevertheless it has occasionally served a good purpose, and a few happy results are recorded in cases of linear contraction.

Division of the stricture.—The practice of nicking a linear stricture in two or three places as a first step in the treatment by dilatation is a good one, and generally devoid of danger. It can usually be done entirely by the sense of touch with a straight, blunt-pointed bistoury passed along the left index finger as a guide.

The operation of internal proctotomy consists in dividing the whole of the stricture tissue, in the median line, either anteriorly or posteriorly. It is called internal because the incision is confined within the rectum and does not involve the sphincter; and it is generally performed with a knife in preference to the cautery or écraseur. Regarding this operation there is not very much which needs to be said. There have been many unpublished cases of its performance, especially in New York, and I should probably express the general feeling of the profession fairly well were I to say that it is not looked upon with any very great favor. Though at first sight it might appear a less serious operation than the external one next to be described, it is in reality attended by greater danger. The sphincter being still undivided prevents a free discharge from the wound, and in this way greatly increases the liability to pelvic inflammation. The danger of hemorrhage is not very great when the incision is confined to the median line, but should there be trouble from this cause, the advantage of a free external wound in controlling it at once becomes manifest. When the cut is anterior as well as posterior, the anatomical relations must be borne in mind lest the peritoneum in the female or the bladder in the male be wounded. The following case represents my entire experience with the operation, which I abandoned after once trying, being convinced of the advantages of the operation next to be described.

Case I.—Mrs. ——, aged twenty-six. This patient was a woman with a syphilitic history. The stricture was of eight years' growth, and had previously been treated both by nicking and by gradual dilatation. As a result of this treatment she describes an attack of "inflammation of the bowels," which made her very dangerously sick. The stricture was two and one-half inches from the anus, was of just sufficient calibre to engage the end of the index finger, and did not involve more than one inch of the bowel, though there was the usual amount of ulceration above it. I divided the constriction by a single deep, posterior incision which did not implicate the sphincter, and the operation was followed by an attack of pelvic peritonitis which nearly cost the patient her life. This may have been due to the operation, or it may have been due to attempts at dilatation which were begun early and followed with perhaps too great vigor; but it was certainly excited by the patient leaving her bed, going down-stairs, indulging freely in wine, and submitting to the embraces of her lover.

Three months after the operation I completely

[1] Smith: Diseases of the Rectum. Louisville Medical Herald.

lost track of the case. At that time the calibre of the stricture was so much increased as to permit of easy digital examination of the parts above. The increased size seemed due entirely to a deficiency in the old cicatricial tissue at the point of incision, the rest of the circumference of the part having much the same feel as before the operation. The act of defecation was much less painful, and her condition was altogether much better. I never counted the case as showing what could be done by the operation until a few months ago and more than four years after its performance. In fact I had little doubt that the contraction had returned, and supposed the patient had either succumbed to the disease or submitted to colotomy. At that time the woman was in perfect health and spirits, and since then I have thought better of the operation.

Other similar cases have been reported in this country with equally good results.[1]

External proctotomy involves not only the division of the stricture but of all the parts below, including the anus. This is the operation which is usually accredited to Nélaton. It may be performed in several ways and with the knife, galvano-cautery, or écraseur. The operations with the galvano-cautery apparatus and the écraseur were invented by Verneuil,[2] and have been practised by him more than by any other surgeon.

The operation as performed by him consists in passing the left index finger through the stricture for a guide, and then plunging a trocar from a point in the median line just in front of the tip of the coccyx into the rectum onto the tip of the finger above the stricture. After drawing out the trocar a fine bougie is passed through the canula into the rectum and brought out at the anus. Removing the canula the bougie is replaced by the chain of the écraseur and the operation is completed.

The same section may be accomplished by repeated strokes with the galvano-cautery or thermo-cautery-knife. Both operations are intended to prevent hemorrhage. By any one of these methods all of the stricture tissue and the parts below may be divided. Nélaton's method was to introduce the left index finger as far as the stricture, and with this as a guide, to pass in a blunt bistoury and divide all the soft parts below the stricture as nearly as possible in the median line. By pulling open the lips of this incision the stricture comes plainly into view and may be divided by a second incision.

In performing the operation, I prefer the knife to any other method of cutting, and have had one adapted for the purpose, which is shown in the figure.

It is simply the lithotomy-knife, made heavier in the back and at the handle, for with an ordinary bistoury there is great risk of a bad accident from breaking the blade in cutting through an old stricture, which is often as hard as cartilage. The blunt point on the end of this blade is a great convenience in passing the knife along the index finger, avoiding, as it does, all chance of wounding the operator.

The best position for the patient is the lithotomy position, and the incision with the knife figured may be made at one stroke. The blade should be passed fairly through the stricture before the cutting is begun, then the stricture is divided completely, as near as possible in the median line posteriorly, and, finally, the incision is continued downward and outward, growing deeper as it approaches the perineum, till finally all the soft parts are severed between the anus and the tip of the coccyx. In this way a large triangular wound is made, the apex being within the rectum above the stricture and the base at the skin, and all the stricture tissue is completely cut through. There will generally be a free gush of blood when the cut is made; but I have never seen so much as to make me prefer the écraseur or cautery operation to the knife. The rectum should at once be packed in the manner already described, without waiting to try any other method of stopping the bleeding. This is a precaution which should never be omitted.

It may be asked, why should so large an incision be made and so much tissue be divided below the actual disease? The answer is simple. In the first place, this incision provides for free drainage and discharge in the most effectual of all ways, by furnishing a dependent gutter-shaped opening which cannot be closed. This is better than any number of drainage-tubes; and it is this alone which makes the external operation a safer one than the apparently slighter internal incision.

In the second place, by this incision the sphincter is completely divided and another great point is gained. The operation we are now considering, it should be remembered, is nothing less than a substitute for colotomy in the same class of severe cases for which that operation is generally considered the only relief. One point which is exceedingly well brought out in the study of these cases, is the important part played by the sphincter muscle in the sufferings accompanying severe cases of stricture and ulceration, and the relief which may be obtained by its simple division without interference with the stricture itself. In one case of Verneuil's, for example, there was a stricture high up, and yet, under a mistaken diagnosis of spasmodic stricture at the anus, the sphincter was cut through with the galvano-cautery, while the real cause of the trouble was untouched, and yet there was entire relief from suffering. The same experience has been repeated often enough to establish the general principle that free division of the sphincter is not only a justifiable therapeutic measure for the relief of the pain attendant upon either malignant or benign stricture or ulceration, but is often the best means at the surgeon's hand for allaying the suffering.

By the external operation, then, the obstruction is divided and one great cause of suffering is abolished, and both are effected by the same incision.

The after-treatment of the incision is very simple. When the rectum has been tightly packed with picked lint, it will usually cause more or less uneasiness on the following day, unless the patient be kept partially narcotized. For this reason I generally remove enough of it on the following day to give the patient ease, and the remainder is allowed to remain until suppuration has commenced. It may usually all be picked out by the third or fourth

[1] Whitehead reports an old fibrous stricture in which he made both an anterior and a posterior incision, and continued the treatment by dilatation. Two months after the operation the patient was much improved, and the passages were large and natural. Amer. Jour. Med. Sci., January, 1871. Lente and Beano each report a similar case in the same journal, the former in July, 1873; the latter, April, 1873.

[2] Verneuil: Des rétrécissements de la partie inférieure du rectum, et de leur traitement curatif ou palliatif par la rectotomie linéaire, ou section longitudinale de l'intestin, a l'aide de l'écraseur. Gaz. des Hôp., October 26, 29; November 7, 9, 16, 19, 1872. Also, Traitement palliatif du cancer du rectum au moyen de la rectotomie linéaire.—Gaz. Hebdom., March 27, 1874.

day without causing any pain. The subsequent treatment of the incision itself consists wholly in cleanliness, which may be obtained by gently syringing the part with warm water and a little carbolic acid. No particular attention need be given to regulating the passages. The first one after the operation will often be the only comfortable one the patient has experienced for years; and unless there is some special reason for regulating their frequency or quality, they may be left entirely to nature.

The case which follows will give a very fair idea of what may be hoped for from this method of treatment.

CASE II.—Mrs. ——, aged thirty-five, mother of one child, twelve years old. This patient had always suffered from obstinate constipation, and several years ago was relieved artificially of impacted fæces. Her husband assures me there is no venereal history, nor is there the slightest reason to suspect any. The symptoms of rectal trouble began six years after marriage, at which time she was operated upon for internal hæmorrhoids. Soon after this she began to suffer from the usual symptoms of ulceration of the rectum.

The examination revealed advanced ulceration of the whole circumference of the bowel, with stricture about an inch and a half from the anus, which just admitted the end of the index finger. In connection with the stricture there were two fistulæ. For this condition the patient had submitted to the usual treatment by dilatation, but without relief. Her general condition was such as is usually seen in advanced cases of this disease. She had lost flesh and appetite, and the suffering was extreme. What she most dreaded was an action of the bowels, so great was the pain attendant upon it.

The operation which I have described was performed. One of the fistulæ was also divided, but the other, which communicated with both rectum and vagina, was left to the chance of spontaneous cure, since the usual operation for recto-vaginal fistula would have been necessary for its closure. The ulcerated surfaces, both above and below the stricture, which were of large extent, were scraped with the handle of a scalpel to try and excite a healthy action, and the wound was thoroughly packed with lint.

The subsequent treatment consisted in absolute rest in bed, milk diet, and dressing the wound by the introduction of a pledget of lint. After a few days a painless evacuation occurred from the bowels, and these continued regularly. No attempt was made at passing a bougie, and the stricture was left entirely to itself. The immediate effect of the operation was a most marked and satisfactory relief of the most painful symptoms.

The passages were painless and involuntary, but always preceded by the warning sensation which gave the patient ample time to prepare herself. At the end of six weeks she had improved greatly in general condition and was more comfortable than at any time since the trouble first began. She had regained the control of her evacuations, which were normal and occurred daily without pain; but there was incontinence of wind. In this condition the patient returned to her home in the West under the care of her own physician.

Six months later she again came to New York for treatment. There had been no return of the suffering and the general health was greatly improved; but there was still considerable discharge of matter from the anus, and she was uneasy about the occasional involuntary discharge of flatus. Except for these two things she would have considered herself well. An examination showed a very marked decrease in the amount of the stricture tissue and a softening of the induration. The incision through the soft parts below the stricture had never healed, the patient having exercised freely and constantly while at home, and a good deal of the discharge complained of came from this cut surface. There were two distinct lines of ulceration within the rectum; one on the anterior wall, superficial, about half an inch broad and an inch and a half long; the other at the site of the incision, posteriorly, deeper, and running a considerable distance up the bowel. At all other parts the old ulceration was entirely healed and its former location was marked by a thin, glistening, bluish-white cicatrix.

Attention was at once turned toward the healing of these ulcerated surfaces. The patient was put upon an almost absolute milk diet, and after a time was confined absolutely to bed. The remains of the primary incision in the perineum were induced to heal by daily dressings of lint and balsam of Peru, and the ulceration above was treated by applications of bismuth and opium, nitrate of silver, balsam of Peru, iodoform, and oxide of zinc, alone and in combination. At the end of two months she was so nearly well that attention was turned to the recto-vesical fistula. The openings into both rectum and vagina were small, but there was a considerable abscess cavity in the recto-vaginal septum, which discharged through both openings. This cavity was freely laid open into the rectum to allow of drainage. After one month more the ulceration on the anterior wall of the rectum had entirely healed, that on the posterior wall, which was much more extensive, had nearly healed; the incision had cicatrized, and the abscess cavity in the recto-vaginal wall had closed, leaving only an exceedingly small fistulous track communicating with the rectum and the mouth of the vagina, but causing no symptoms. The discharge from the rectum had practically ceased, and in this condition, which certainly warranted a prognosis of speedy and complete recovery, she again returned to her own physician to continue the treatment for a few weeks longer till she should be entirely well. Two months later I again heard from her and the report was most favorable.

This case is certainly worthy of a careful consideration. When the lady applied to me all the supposed resources of rectal surgery had been exhausted except colotomy. I do not think I exaggerate when I say that most surgeons would have at once decided in favor of colotomy, and would have been justified, of course, in so deciding; for colotomy is still the recognized mode of treatment in these cases. In my own mind, colotomy was always present as the *dernier ressort;* but having tried proctotomy in several instances, and been more or less satisfied with its results, I determined to make this a test case. The result was most happy, and yet there is nothing exceptional in that result, though the great tractability of the sufferer and her determination to do all that was asked of her, alone rendered it possible. She is now infinitely better off than she would be with an artificial anus. In an analysis of cases made some time since I found that in eighteen cases of non-malignant stricture treated in this way all the patients were greatly relieved as to general health or local condition, or both. In eight, kept under observation for a period of from

three months in one case to four years in three cases, the cure was absolute, there being no return of the contraction, and in some a disappearance of all induration. A tendency to recontraction is noticed in four, due in two cases to the fact that all of the stricture was not divided.[1]

I have performed this operation in various other cases and have every reason to be satisfied with it. In malignant or non-malignant stricture and ulceration I have never seen it fail to give immediate relief to suffering, and as a means of relieving the pain of this disease I believe it to be fully equal to colotomy. It fulfills, also, the other great indication for colotomy—the overcoming of obstruction. Too much must not be expected of the operation, however. I have seen several cases in which I have advised the operation in the practice of others which have led to disappointment for this very reason. An old stricture of the rectum, with extensive ulcerations, is a well-nigh incurable disease. Proctotomy may be certainly relied upon to accomplish two things —the relief of pain and the overcoming of obstruction—even in the worst cases, and in favorable cases taken in time it may effect a cure, but it will not cure them all. Nothing will. After proctotomy, as after colotomy, there is still a diseased rectum, which must be treated by every possible means. In the case given above I succeeded ultimately, by long and patient efforts, in curing that; but it cannot be done in every case. The stricture is easier to overcome than the ulceration which accompanies it; and after the former is divided the latter still remains and must be treated as an ulcer with the same results, both good and bad, as usually attend the treatment of that most painful, obstinate, and often incurable condition. But the chances of curing it, and, at all events, of relieving it, are much better after this operation than before.

It is understood that I do not advocate this operation in cases of disease high up the bowel, though it may be done at a considerable distance from the anus, and where an incision involving the anterior wall would be unjustifiable, for the anatomical reason that the peritoneum extends so much lower in front than behind.[2]

Colotomy.—This is the last resort of surgery in dealing with ulceration or stricture of the rectum. In ulceration it may be a curative measure; in stricture it is only palliative, and should, therefore, not be undertaken till all other measures have failed. It fulfills two important indications: the relief of pain and the overcoming of obstruction, and we have already seen how both of these may be met, in many cases, by other means, which, even were they only partially successful, are infinitely preferable.

When none of the methods already pointed out serve to assuage the suffering, and when it is probable that the pain is not due to an irritable sphincter muscle, or to pressure on neighboring nerves from the mass of the deposit, cancerous or otherwise, in which latter case colotomy cannot be expected to afford any relief, and when none of the means already described for preventing or overcoming obstruction can be applied, colotomy may be resorted to. There is, however, but one class of cases in which obstruction may not be overcome by attacking the stricture itself instead of the bowel above it, and that is where the stricture is so high up that it cannot be safely reached by the knife to cut it.

Judged by these rules, colotomy would be limited to a small proportion of cases. It would be tried after division of the sphincter and of the stricture, had each failed to give relief in disease near the anus, and practically would be limited to disease high up the bowel. Such restrictions would greatly diminish the number of operations of colotomy, especially in the United States, and it is possible that this might be done with advantage. We seldom see in the reports of the operation, in current literature, any other reason given for its performance than the existence of obstructive or painful disease, as though the mere presence of a stricture of the rectum, malignant or benign, were a justifiable reason for at once resorting to this repulsive and serious operation.

It has yet to be proved that colotomy delays cancerous growth, but it certainly prolongs life by diminishing pain and relieving obstruction; though the relief to the pain may be, and often is, only partial, for a very small amount of fæces which has passed the artificial anus, may cause as much suffering and tenesmus as the natural quantity.

In almost direct proportion as the operations of proctotomy and of partial or complete excision of strictures have become popularized, and their advantages in suitable cases have become manifest, the operation of colotomy has been limited, and the natural objections to it, both by patient and surgeon, have been allowed more weight in influencing the treatment. Especially is this the case in France, the birth-place of the operation, and in Germany, while England, as represented by Allingham, is plainly following in the same course. In this country alone does colotomy still hold its sway, partly, I cannot help believe, for the reason that its various substitutes have never been so thoroughly tried here as on the other side of the water.

"THE MADISON," NO. 40 EAST TWENTY-FIFTH STREET,
New York.

[1] External Rectotomy as a Substitute for Lumbar Colotomy in the Treatment of Stricture of the Rectum. The New York Medical Journal. March, 1882.

[2] For other literature on this subject the reader is referred to the following bibliography:

Parras: Du traitement des rétrécissements du rectum par la rectotomie externe.—Gaz. des Hôp., p. 1148, December, 1872.

Muron, A.: Des rétrécissements de l'extrémité inférieure du rectum, et de leur guérison par la rectotomie linéaire.—Gaz. Méd. de Paris, January 4, 1873.

Pochier, A.: Sur l'application de la rectotomie linéaire aux rétrécissements très-étendus du rectum.—Lyon Méd., February 20, 1876.

Pinguet: Des rétrécissements du rectum: appréciation des diverses méthodes thérapeutiques.—Thèse de Paris, No. 17, 1873.

Tison: Nouvelles considérations sur la rectotomie linéaire.—Thèse de Paris, 1877.

Ceron: Thèse de Paris, No. 390, 1875. Discussion sur les rétrécissements du rectum.—Bull. de la Soc. de Chir., p. 89. Paris, 1873.

Verneuil *et al.*: Rectotomie et colotomie (Soc. de Chir., Paris).—Progr. Méd., January 7, 1882.

TREATMENT OF YELLOW FEVER BY PHENIC ACID.—M. Lecaille, of Rio Janeiro, following out the doctrine of ferments, has been treating yellow fever with phenic acid. In twelve cases under his care, success was complete. In one instance the stage of "black vomit," etc., had set in, and the patient was almost moribund. Lecaille saw him at this time, *i.e.*, the fifth day. Phenic acid was injected hypodermically, syrup of the phenate of ammonium was given per orem, and sulpho-phenic per rectum. This was done at intervals of two hours. On the third day of treatment the patient was pronounced cured. A second patient was in the cosmic stage of the parasite. Ten hypodermics, together with rectal injections of sulpho-phenic and glyco-phenic were made, with the result of bringing about a cure on the seventh day.—*Cronica Med.-Quir.*

CASES OF ACUTE GLAUCOMA,

IN THE PRACTICE OF DR. C. R. AGNEW AND DR. DAVID WEBSTER.

(Reported by DR. WEBSTER.)

CASE I.—Mrs. C. C——, aged thirty-five, was referred to Dr. Agnew by Dr. George D. Bleything, April 13, 1882. She said that about the middle of last February she was attacked with a severe inflammation around the stump of a decayed and broken off eye-tooth, that of the left upper jaw. The gums were so swollen that she could scarcely open her mouth, and she had severe pain through the left side of her face and head. This condition of things continued for nearly two weeks, and was beginning to improve when she was suddenly attacked with a severe supraorbital neuralgia of the *right* side. After this pain had lasted four hours she "felt a sudden snap in the right eye," as though something had given way, and the sight became instantly obscured. The eye was bloodshot for three or four days, and then the sight cleared up gradually till she could see objects in the room, or the pattern on a carpet. There had been little pain in the eye since the first few days, but some occasionally over the eyebrow.

Present condition.—Eyeball slightly injected, pupil widely dilated, iris pressed forward, cornea steamy, optic disk cupped, but finer details of fundus visible. Tension + 2. V. = $\frac{2}{200}$. Ordered eserine, two grains to one ounce, one drop in the eye three times a day.

April 15th.—V. = $\frac{1\frac{1}{2}}{200}$. Pupil does not yield to eserine.

The use of eserine was continued until April 20th, when, as the eye failed to show any improvement, the patient was placed under ether, and an iridectomy was performed by Dr. Agnew. Only the eye operated upon was bandaged, the other being left open in order to avoid one of the supposed agencies in the causation of acute glaucoma in the second eye after an operation upon the first. The eye healed kindly after the operation, and the patient was allowed to go home on the eighth day with V. = $\frac{2}{200}$. The left eye was unaffected throughout.

May 15th.—No pain since the operation. The redness of the eyeball and the opacity of the media have disappeared. The optic disk is deeply excavated, and there is a retinal opacity about a quarter as large as the disk in the supero-temporal quadrant. V. = $\frac{1\frac{1}{2}}{200}$; field limited. Tension normal.

It seems most probable that glaucoma simplex existed in this eye previously to the maxillary periostitis, and that the latter caused an acute glaucoma to supervene through the agency of reflex irritation of the fifth nerve. It is quite possible, however, that the excavation of the optic disk was produced by the continued high degree of intraocular pressure, which lasted for six weeks.

CASE II.—Mr. M——, aged seventy-two, bachelor, cotton broker, was first seen by Dr. Webster on February 22, 1877. He stated that he had been totally deaf since he was thirty years old, and had never learned the art of communication by signs, but had always to be written to, while he carried on his part of the conversation *viva voce*. A week before we saw him, Mr. M. had caught cold in his head. On Friday (16th) his eyes watered and "bothered" him in the office. On Saturday (17th) he went out without his overcoat, and thus added to his cold. On Sunday (18th) his eyes became red and painful, and his sight failed rapidly, and on Monday (19th) he was blind in both eyes all day. He could be only imperfectly communicated with by the sense of touch, and he passed the day in a very wretched condition, groaning with pain in his eyes, but forbidding his friends to summon a physician, in the expectation that his trouble would soon pass away. On Tuesday morning (20th), the sight had returned to the right eye in some degree, and has since gradually improved so that now (22d) he reads coarse writing, and with + $\frac{1}{4}$ has vision = $\frac{20}{30}$.

Left eye.—V. = perception of light; pupil dilated and fixed; iris pressed forward, eyeball injected, and media so turbid that fundus cannot be observed. Tension increased (+2). Still a dull pain behind left eye, but none in right. Lids of both eyes somewhat red and swollen, but left more so.

February 23d.—Iridectomy upon left eye in the morning before breakfast, by Dr. Agnew. A retentive bandage was placed over the eye operated upon, the other being left open as his only means of communicating with the external world.

March 7th.—R. V. = $\frac{20}{30}$ with + $\frac{1}{4}$. L. V. = $\frac{20}{40}$ with + $\frac{1}{20}$. No cupping of optic disks. Tension normal in both. There has been no pain since the operation. The eye improved steadily, and Mr. M—— was able to return to his office on the thirteenth day after the operation.

We heard only favorable accounts of Mr. M—— for nearly two years. On January 23, 1879, he came to consult us again. He had had some pain in and about his right eye for several weeks, and the vision of that eye was now reduced to perception of light. Ophthalmoscopic examination showed slight central cloudiness of the lens and an excavated optic disk, but the details of the fundus could not be made out. The pupil was sluggish, but not notably enlarged; the anterior chamber was shallow, but the tension was very slightly, if at all, increased. An iridectomy was thought advisable for the relief of pain, and with the hope of some improvement in sight.

Two days later (January 25th) ether was administered, and an iridectomy upward was performed by Dr. Agnew. Only the eye operated upon was bandaged, the other eye being left open as before for the patient to read writing with. The eye recovered without pain or unpleasant reaction, and Mr. M—— was soon at his work again.

Our last record of this patient's visits to our office was on November 7, 1881, when the following note was made: "R. V. = perception of light. L. V. = $\frac{20}{200}$. Still reads coarse writing." He died May 5, 1882.

There are some interesting points in connection with Mr. M.'s case. In the first place, it was unfortunate for him that both his eyes were not operated upon early in the first attack. If this had been done, the chances are that he would have retained useful sight in both as long as he lived.

In the second place, we think it remarkable that his right eye recovered vision of $\frac{20}{30}$ without treatment, after having been "blind" for all one day.

His management after the operation was necessarily somewhat extraordinary. His room was darkened, and he was told to lie still and to keep the unbandaged eye shut. But it was necessary for him from the first to put on his spectacles and read messages several times daily. When visited the day after the first operation he was found sitting up in bed and smoking a cigar. Yet, notwithstanding the difficulties in the way of his successful management, his recovery after both operations was quite

as rapid as is usual in cases where the greatest care is observed.

Case III.—Miss A. B——, aged sixty, very deaf, was as well as ever Tuesday night (May 30, 1877) when she went to the theatre. On her way she was attacked with a fit of sneezing which made her think she had caught cold. Soon after entering the theatre she had a copious watery discharge from her right nostril. After she had watched the play about two hours the light began to dazzle her eyes, the lids of the right eye began to swell, and she very soon noticed that on closing her left eye she could see very little with the right. The eye immediately became very painful. The pain has continued day and night ever since, and she now (June 1st) keeps up a constant groaning. She keeps the eye closed, partly on account of the swelling of the lids, and partly because of its sensitiveness to light.

Inspection shows a moderate amount of chemosis. The pupil is dilated to about three times the size of its fellow, and the anterior chamber is shallow. The tension is much increased (+ 3). Vision, fingers at three feet. The cornea is cloudy, and there seems to be a haziness of the media back of the cornea. A slightly reddish reflex is all that can be seen of the fundus.

June 2d.—A broad, peripheral iridectomy upward, under ether, was performed in the morning before breakfast by Dr. Agnew. Charpie with a flannel bandage and a black silk mask were applied over both eyes.

Upon coming out of the ether the patient found that the pain was gone. The eye gradually recovered until on the 13th she was able to come to the office. Her vision was then R., $\frac{10}{70}$; L., $\frac{20}{70}$.

June 18th.—R. V.= $\frac{20}{15}$.

June 26th.—R. V. = $\frac{20}{60}$ with — $\frac{1}{12}$s. ⌒ — $\frac{1}{60}$c. ax. 90°. L. V. = $\frac{20}{30}$ with + $\frac{1}{12}$s. ⌒ + $\frac{1}{60}$c. ax. 180°.

There was at this date no redness of either eye, and both visual fields were normal.

Case IV.—March 8, 1875.—Miss M. J. K——, aged sixty, says that her eyes have been weak for years. When she tried to do work requiring fixed attention, as in crocheting, her left eye would give out, and her sight would be "quickened" by any change of work, even to reading. She has had periods of very foggy sight, followed by clearer vision. She had much pain in the left eye a fortnight ago, but very little since. R. V. = $\frac{20}{20}$ with + $\frac{1}{1}$. Visual field normal.

Left eye, vision, only perception of light for the last two weeks. Tension much increased (+ 2); pupil enlarged and sluggish; ciliary region injected; cornea hazy. Fundus not to be seen.

March 9th.—Ether administered, and an iridectomy upward performed by Dr. Agnew.

March 12th.—Eye not inflamed or painful, but sight not improving.

April 1st.—Left eye, vision = $\frac{20}{200}$ with + $\frac{1}{10}$. Ordered + $\frac{1}{10}$ delicately tinted blue for both eyes, for constant use.

August 18th.—V. = $\frac{20}{15}$ each eye, with her glasses (+ $\frac{1}{10}$).

The result in this case was good beyond expectation. We do not often see eyes with the sight reduced to perception of light for two weeks by acute glaucoma recover vision of $\frac{20}{20}$ after an iridectomy.

Case V.—December 3, 1874.—Mrs. E——, aged forty-nine, during the past few years has had very severe headaches, occurring sometimes as often as once in two or three weeks, and compelling her to go to bed. She has had for a year occasional chromopsies, and during the past six months occasional spells of transient smoky sight. On Thanksgiving day she drove out, and was exposed to a cold wind, went to bed very tired, and after midnight began to feel restless and somewhat nauseated. Pain came on in the head, centering in the left eye. On Friday the headache continued, and the left eye began to close. On Saturday vision was observed to be very defective in the left eye, so much so that she could only see the position of the window. The eye continued closed, painful, and discharging scalding tears until Tuesday afternoon, when Dr. Agnew was called in to see her. Examination revealed all the physical signs of glaucoma in the left eye. Tension increased (+ 3); pupil dilated and fixed; pupillary field hazy, rendering the fundus invisible; ciliary vessels injected; slight subconjunctival œdema; vision reduced to counting fingers at five feet.

Right eye, tension + 1; pupil sluggish and superotemporal segment a little dilated; media clear; no cupping of disk; no pulsation of retinal vessels. Reads ordinary type at 18″; visual field normal.

Advised immediate iridectomy upon left eye. Case seen by Dr. Knapp, who concurred in diagnosis and advice.

The patient was put under ether, and an upward iridectomy was performed on the left eye by Dr. Agnew. There was some bleeding into the pupil from the cut iris.

December 21st.—The eye recovered kindly from the operation, and the media have cleared up.

R. V. = $\frac{20}{15}$ with — $\frac{1}{36}$ c. ax. 90°. L. V. = $\frac{20}{40}$ with — $\frac{1}{36}$ c. ax. 90°. Right visual field at one foot, 21″ vertically and 29″ horizontally. Left visual field larger than right in all directions.

Examination of the right eye with the ophthalmoscope shows a very slight haziness of the media, and an apparent multiplication of enlarged bloodvessels converging to the optic disk.

The eye shows slight increase of tension, the pupil is sluggish and slightly dilated in its superotemporal portion, and there is slight engorgement of two or three veins emerging from the superonasal ciliary region.

There is no excavation of either optic disk, and no pulsation of the retinal vessels.

January 19, 1875.—Vision the same in both eyes as at last examination. Tension normal in both. No smoky vision since last date.

April 10th.—Vision = $\frac{20}{30}$, each eye, with — $\frac{1}{30}$ c. ax. 90°. Ordered the same, very large, and delicately tinted blue.

November 3d.—Eyes continue the same.

October 17, 1878.—R. V.= $\frac{20}{15}$ with — $\frac{1}{36}$ c. ax. 90°. L. V.= $\frac{20}{30}$ with — $\frac{1}{36}$ c. ax. 90°.

January 8, 1879.—R. V. = $\frac{20}{15}$ with — $\frac{1}{36}$ c. ax. 90°. L. V.= $\frac{20}{70}$ with — $\frac{1}{72}$s. ⌒ — $\frac{1}{36}$c. ax. 90°.

July 14th.—In the latter part of June the *right eye* ached, and the sight was somewhat obscured. Vision was reduced to $\frac{20}{60}$, but under the use of pilocarpine eye drops and laxative doses of podophyllin went up to $\frac{20}{30}$. She has been kept awake nights for hours at a time by the aching. Vision = $\frac{20}{15}$ each with her glasses.

Ophthalmoscopic examination shows commencing excavation of right disk. Visual field and tension normal. Advised to wear her concave cylindrics constantly for distant vision.

September 4th.—Was very comfortable until two weeks ago. One night last week she awoke, and, after lying awake for half an hour, the right eye began to be painful. She had a drop of pilocarpine

put in, which relieved the pain, and she went to sleep again. There has been some pain in the eye every evening since, at about twilight, but a drop of the pilocarpine solution has produced prompt relief. The eye has not been red at any time. Vision = $\frac{20}{20}$ each with her glasses. There is decidedly increased cupping of the disk of the right eye. There has been no trouble with the left since the operation.

September 24th.—V. = $\frac{20}{20}$ each. Has obscurations and pain in right eye almost every day. The excavation is decidedly more marked, but the visual field remains normal.

October 7th.—Has been pretty comfortable most of the time since last visit.

A week ago, at tea-time, she had an attack of pain and obscuration of vision of right eye, lasting about twenty minutes. Has occasionally been kept awake by pain for an hour at a time, but always relieved by pilocarpine; V. = $\frac{20}{20}$ each.

January 24, 1880.—V. = $\frac{20}{20}$ each with her glasses. Visual field of right eye contracted on all sides, but the temporal. Excavation of optic disk m. $\frac{1}{10}$. No cupping of left disk. Since last visit she has had more frequent attacks of obscuration of vision of right eye. At times could not distinguish objects with it.

January 28th.—Patient put under ether, and an iridectomy upward performed upon the right eye by Dr. Agnew.

February 28th.—No unpleasant reaction followed the operation. Atropine was dropped into the eye only once to insure the non-formation of adhesions of iris. There has been no pain or obscuration since. R. V. = $\frac{20}{20}$ with $-\frac{1}{30}$ c. ax. 90° ⌒ $-\frac{1}{48}$ c. ax. 180°.

There has been no return of glaucomatous symptoms in either eye up to the present time, May, 1882.

Case VI.—November 7, 1874.—Mrs. D. A. M——, aged fifty-five, was attacked with neuralgia of left brow a year ago, and has suffered from such attacks frequently since. Three weeks ago she "caught cold in her left eye." It was red and very painful for more than two weeks. There is now much less redness and no pain. The tension is much increased (+3); the pupil is dilated and fixed, and presents that peculiar *greenish* reflex from which the disease takes its name. Vision = $\frac{3}{200}$.

Right eye, vision = $\frac{20}{40}$ with + $\frac{1}{48}$, visual field slightly limited supero-nasally. Tension normal.

Examined with the ophthalmoscope, the fundus and optic disk of the right eye, were found to be slightly congested. There was no excavation of the papilla, and no want of transparency of the media. It was impossible to see anything more than a dull reddish reflex from the fundus of the left eye.

An immediate iridectomy was advised, but for reasons, on the part of the patient, was not done until ten days later (November 17th), when she was put under ether and the operation was performed by Dr. Agnew. There was bleeding into the pupil.

December 3d.—The eye recovered from the operation without any excessive reaction. V. = $\frac{15}{200}$.

December 8th.—The right pupil is a little larger than normal, and somewhat sluggish. The upper half of the disk is very red.

R. V. = $\frac{20}{30}$ with + $\frac{1}{48}$s. ⌒ + $\frac{1}{48}$c. ax. 90°. L. V. = $\frac{15}{200}$; no improvement with glasses.

December 26, 1876.—A little over two years after the operation upon her left eye, Mrs. M—— presented herself with acute glaucoma of the right eye. Iridectomy was immediately performed by Dr. Agnew upon this eye at the Manhattan Eye and Ear Hospital, and the recovery was good, but unfortunately the resulting vision was not noted.

Case VII.—July 8, 1873.—T. D. S——, aged fifty-five, barber, says that Dr. Agnew performed an iridectomy upon his *right* eye four years ago for the relief of acute glaucoma, he having suffered for several months from "terrible neuralgia" in and about the eye.

Another attack of circum-orbital neuralgia of the *left* side came on two weeks ago, and lasted until three days ago. He still sees rings round the lights, and complains of impaired vision.

The left eyeball is injected and its tension above the normal.

R. V. = $\frac{20}{30}$ with + $\frac{1}{7}$. L. V. = $\frac{20}{100}$ with + $\frac{1}{7}$.

The right visual field is of normal extent downward, but extends upward and laterally from the point of fixation only about two inches.

The left visual field is normal downward, extends upward six inches, temporally nine inches, and nasally seventeen inches. Both visual fields were measured at a distance of one foot.

Ophthalmoscopic examination revealed the same conditions in both eyes, viz., general fundus H. $\frac{1}{7}$, and disk E., showing an excavation 1.63 mm. in depth.

An immediate operation upon the left eye was advised, but the patient postponed it until July 14th, when he had another acute exacerbation, with great pain and increase of tension, with a corresponding impairment of vision.

Dr. Agnew then performed an upward iridectomy upon the left eye.

August 1st.—The recovery has been without complication.

L. V. = $\frac{20}{40}$ with + $\frac{1}{10}$s. ⌒ + $\frac{1}{24}$c.

December 24th.—Both eyes have remained quiet. The vision and refraction are the same as at last visit, and the patient has resumed work.

Case VIII.—August 31, 1876.—Mr. W——, aged fifty-five, married, had noticed for six months that his spectacles were unsatisfactory, and had experienced occasional photopsiæ. He had observed a tendency to blurring in near and distant vision, coming on without any other provocation than ordinary use. He had suffered from decayed teeth, and had had considerable work done by a dentist during the same period. On Tuesday (12th) he took a drive in the country to the top of a hill, and was exposed to a cold wind while looking at the prospect. That night an active inflammation at the roots of the left upper incisors set in, and a swelling of the most painful character extended over the front of the superior maxillary bone through the soft parts, with some swelling of the evelids of the same side. The same day, or the day after, the vision of the left eye became affected. The degree of pain in the eye itself was masked by the extreme pain throughout the whole of that side of the face, but he remembers that the application of warm poultices to the face sent darting pains into his left eye.

Status præsens.—Inflammation over the alveolus subsiding; left eye counts fingers at three feet; cornea slightly hazy; ciliary region deeply injected; pupil moderately dilated and immovable; anterior chamber diminished in depth; media so hazy as to make it impossible to see the details of the fundus; tension increased. Myosis of pupil of right eye; patient too nervous to permit its vision to be accurately tested.

September 2d.—Iridectomy upward on left eye by Dr. Agnew. No vomiting from the ether.

September 7th.—Eye did well until last night when patient suffered much from periorbital pain. Applied two leeches to temple.

September 9th.—Pain came on again last night. This morning the dentist removed the pulp of an aching tooth, and two leeches were applied to the temple in the afternoon.

September 14th.—Patient has had more or less pain every night until now. To-day the dentist *extracted* the painful incisor, and *broke off* the troublesome eye-tooth.

September 19th.—Both the eye and the face have steadily improved since the last date, and the patient is now able to go about.

R. V. = $\frac{20}{100}$: $\frac{20}{40}$ with + $\frac{1}{18}$. L. V. = $\frac{2}{200}$.

September 29th.—L. V. = $\frac{2}{200}$. Ordered + $\frac{1}{18}$ for the distance and + $\frac{1}{8}$ for reading.

July 12, 1877.—L. V. = $\frac{20}{100}$ with + $\frac{1}{18}$.

This patient had no further trouble with his eyes. He lost his life in the Spuyten Duyvil Railroad accident of 1881.

There seems to be reason for believing that in his case the acute glaucoma was the result of a reflex irritation through the medium of the fifth nerve which was involved in the maxillary periostitis. At all events, the eye refused to get well, even after the iridectomy, until the offending teeth had been removed.

Case IX.—April 13, 1874.—S. A——, aged thirty-five, Sister of Charity, has been under treatment for several years, off and on, for granular lids with vascular keratitis. Five days ago she was attacked with a severe pain in and around her right eye. The eyeball was red, watery, and constantly painful. The pupil dilates very slightly after keeping the patient in the office half an hour and instilling atropine six times. Ordered two leeches to the temple and atropine six times an hour, three times a day.

April 18th.—Pain intense and unrelieved by anodynes and iced cloths. Tension increased; slight chemosis; some lymph in pupil. Counts fingers with uncertainty.

Dr. Agnew now performed an iridectomy upward upon the eye, the patient being under ether. Ordered atropine four times a day, and iced cloths.

April 21st.—Pain entirely relieved by the operation. Chemosis mostly gone. Sight gradually improving.

May 11th.—V. = $\frac{10}{200}$.

May 19th.—V. = $\frac{15}{200}$.

September 26th.—V. = $\frac{20}{40}$. The eye is quiet, and the impairment of vision seems to be due to corneal opacity.

It is a question whether, in this case, the vigorous use of atrophia, for the control of iritis, had anything to do with the causation of the acute glaucomatous symptoms.

Case X.—L. C——, aged seventy-three, agent, came under observation at the Manhattan Eye and Ear Hospital, December 5, 1876. He stated that he had never had any trouble with his eyes until about two weeks previously when, while sitting in the parlor one evening, he observed that he could not see as well as usual. Upon covering first one eye and then the other, he found that his right eye was nearly blind. The eye became slightly red, but not painful, and the sight has since remained about the same.

R. V. = $\frac{15}{200}$; L. V. = $\frac{20}{30}$; no improvement with glasses.

Ophthalmoscopic examination showed apparent atrophic excavation of both optic disks. The examination of the fundus of the right eye was interfered with by a haziness of the cornea, but the whole retina could be seen to be studded with small hemorrhages.

As the tension was increased, a diagnosis of chronic glaucoma was made, and an operation upon the right eye was advised.

December 11th.—His wife died since his first visit, and he has been under constant excitement. His right eye has been very painful, and the sight is reduced to perception of light. The opacity of the media has so increased that the fundus cannot be examined. The eye is very red and watery, and the increase of tension is much more marked than at the last visit.

December 13th.—Ether was given, and Dr. Agnew performed an iridectomy upward. The operation was done with a minimum amount of violence, and no iris was left in the wound.

December 19th.—The eye looks about the same as before the operation. There has all along been some pain and some leaking of the aqueous.

March 7, 1877.—The eye has remained red and hard and more or less painful, with dilated pupil, and opaque media ever since the iridectomy.

Enucleation was now performed by Dr. D. Webster, and was followed by very troublesome bleeding, which was stopped by pressure with charpie after four hours of continued effort.

This patient presented himself at the new hospital, in October, 1881, with great impairment of vision of his remaining eye. An ophthalmoscopic examination showed that his whole retina was sprinkled over with ecchymotic spots of various sizes. There was no opacity of the media, no increase of tension, no glaucomatous cupping of the optic disk, and the disease was set down as *retinitis apoplectica*.

The retinal hemorrhages in both eyes, the failure of iridectomy to relieve the glaucomatous symptoms of the right, and the persistent bleeding after enucleation of the eyeball, were probably due to degenerative changes which had taken place in the walls of his blood-vessels. His radial arteries, and such others as could be felt with the fingers, were evidently atheromatous.

The enucleated eyeball was examined by Dr. Abraham Mayer, then the pathologist of the hospital, and the following notes made as to its condition:

"Eye of natural size, and very firm and hard. Cut in vertical meridian. Retina detached all around, except at ora serrata, and choroid in this latter region also detached. Left half of lens has remained in place; not so right half. Cornea and sclerotic much thinner than normal. Thinning of sclerotic most marked. Vitreous humor very fluid. Eye measures in horizontal meridian 25 mm."

Case XI.—November 14, 1877. John W——, aged fifty-eight, was attacked with granular lids in 1861, and was under treatment by various "oculists" for eight or ten years. Fifteen months ago he had a relapse, and was again under treatment for a short time. His eyes have been pretty well since, and until two weeks ago, when the left became painful. He has since been treated with atropine and nitrate of silver.

R., $\frac{20}{100}$: $\frac{20}{70}$ with — $\frac{1}{18}$. L., $\frac{20}{200}$; no improvement with glasses.

Ophthalmoscopic examination shows opacities of both cornea. Fundus normal in both.

December 7th.—Has had cantholysis, and open-

ing of the tear-passage, and various applications have been tried without relief. Vision of left eye is reduced to $\frac{5}{200}$, and there is decided increase of tension. The eye is red and painful, and the corneal opacity has so increased that the fundus can no longer be seen.

An iridectomy was advised, and Mr. W. decided to submit to it without an anæsthetic. Dr. Agnew then proceeded to make an ordinary iridectomy wound at the upper margin of the cornea, and upon the withdrawal of the knife the aqueous gushed out with some force, but did not produce a prolapse of the iris. Upon attempting to seize the iris and draw it out of the wound it was found to be so friable that none could be withdrawn. The operation was completed by snipping out a bit of cornea at the outer angle of the wound to prolong the healing and allow aqueous to leak out.

December 10th.—No pain since midnight after the operation. Anterior chamber re-established for the first time to-day.

January 2, 1878.—R. V. = $\frac{20}{70}$; L. V. = $\frac{20}{100}$; no pain since the operation.

Remarks.—Of the eleven patients whose cases are reported above, five were males and six were females. Their ages ranged from seventy-three to thirty-five. Three were fifty-five years of age, two were sixty, and two were thirty-five. Of the men, four were married and one a bachelor. Of the women, three were married and three single, one of them being a nun.

In these eleven cases *fifteen eyes* were operated upon, one of them twice, making sixteen operations in all. Twelve of the eyes operated upon were affected with primary acute glaucoma, two with acute glaucoma, the result of granular lids and pannus, and one was a case of acute hemorrhagic glaucoma, or of glaucoma supervening upon *retinitis apoplectica.*

The result of the iridectomy was good in all the cases except the one last mentioned. It restored useful vision in thirteen eyes, in one eye it relieved the pain and permanently quieted the eye, but in the hemorrhagic case it was a complete failure, the patient gladly assenting to enucleation for the relief of pain.

A MEDICAL CURIOSITY.

By GUY HINSDALE, M.D.,

PHILADELPHIA, PA.

In 1668 William Ramesay, doctor of physic and physician in ordinary to his Majesty Charles II., published a work entitled "Helminthologia." The book is not only a good exponent of the state of medical knowledge of that time, but the author's style and the strange words that abound in the work make it a literary curiosity.

This is the introduction: "Worms the Subject, and worms the Readers, and a worm the Author of this Book; which must all ere long, be swallowed up of Eternity and be worm-eaten; the Author himself and the proudest Reader as soon as the Book, we are enclosed but in mud walls, and paper walls are as durable."

"Most people (if not all) of both Sexes, of all ages of man from the Womb to the Tomb, are incident to, and may be molested, and direfully tormented and cruciated, with several horrid and intollerable pains and most maladies, nay and even death itself from worms."

The author declares in the title-page that this affection "doth probably appear to be an Epidemical Disease, Killing more than either the Sword or Plague." He professes to treat of the "Various Causes, Signs, Diagnostics, Prognostics, the horrid Symptomes by them introduced, as also the Indications and Method of Cure. All which is Medicinally, Philosophically, Astrologically and Historically handled." The writer says that although "I take the liberty, now and then, for my own pleasure, a little to expatiate, and digress; yet all along, have more respected Matter than Words . . . I considered *Quid scribere, quam quo modo.* So many Books have such large Bodies; but when we look narrowly into them, we find them without Souls." This sentiment is by no means obsolete.

Worms are often alluded to as "vermin," a use of the word which is etymologically correct. Sometimes the author uses the tautology of "helmintick vermin;" in another place Avicenna is quoted as saying that "our bodies are seldome without these Cattle." They "infest also sometimes the Windpipe or Rough artery; nay the pericardion and the heart itself, is not exempt from these vermin."

The book is, of course, full of strange anecdotes. A story is told of "a Wench who was as if she had been possessed of a Devil and at sometimes could not be held by three men (such were her strong convulsive passions) who evacuated by vomit twenty-four pounds of stuff of all colours, twice a day, for fourteen days together, and afterwards great Balls of Hair, pieces of Wood, Pigeons-dung, Parchments, Coals, &c. and after all this, two pounds of pure Blood and then again, Coals and Stones some of them bigger than a wall-nut; besides she had strange fits of laughing, weeping and extasies and at length voyded a live worm by Stool, like unto an Eele of a foot and a half long."

Garlic, onions, and leeks are charged with "breeding many gross crude and indigested humors and fuliginous fumes, offending the brain and causing worms. Cucumbers are much more an unwholesome Food, hard of digestion, yielding but a gross, scorbutick melancholy juice, also sometimes, a crude and phlegmatic matter."

The circulation of the blood is described, Harvey having published his essay on the "Motion of the Heart and Blood" forty years before. Dr. Ramesay informs us that the blood is made of the chyle, "amalgamated with a Serum from the Lymphatics, passes through the subclavals, whence mingled with the Blood, it rushes into the vena cava and so goes into the left Ventricle of the heart, and by its motion, is cast into the Lungs through the pulmonary arteries, to be there as well defaecated of some Emplastic Immundities and excrementitious Crudities."

The author is deeply impressed with the serious nature of the affection, and, indeed, attributes to worms the production of almost all maladies. He says: "But Sots as we are in this most weighty matter, we are too remiss, marrying any deformed piece of mortality for a little money, when we are curious of the strain of our Horses, Doggs, Pigeons, Game-Cocks; and so frequently, we leave a Crook-Back'd, Flat nos'd, Bow Leg'd, Squint-Ey'd, Left Handed, ugly, infirm, Weesle Fac'd, Diseased, Half witted, Hair brain'd, Nonsensical, Gooscappical and Coxcombical, Worm-eaten Ideot, not only to possess our Estates, but our Names, and to build up our Families."

Our author concludes: "That my reader may be

encincted with Reason able to Renix the Hallucinations of that Pangenerical evil of envy and Ignorance which is a cacoethick malady; But especially that he may enjoy an orthostadian Judgment and not to be Depasct with that Truculent credulity which proves Sontick to most men, and an assured prodromos of Ruine; I thought it not amiss to aedipize some things and indigitate thee, wherefore others in this book are handled in that manner they are: Whereby I doubt not, but that the Judicious will suffragate for me and Parastate for my Integrity and candor in it."

ANTE-PARTUM HOUR-GLASS CONTRACTION, WHICH CONTINUED POST-PARTUM, ACCOMPANIED BY PROFUSE HEMORRHAGE.

By S. J. RADCLIFFE, M.D., A.M.,

WASHINGTON, D. C.

I was called at 1 A.M., May 19, 1871, to see Mrs. E——, resident of Georgetown, in her fourth labor. She said her previous labors had been difficult, and attended with much hemorrhage. I found her in the second stage of labor, expulsive pains every ten to twelve minutes, strong and active. The vertex presented in first position, parts soft and yielding; general condition good.

After one hour, I found very little progress. On introducing the finger and keeping it against the presenting part during a pain, I discovered the head would advance during the pain, and recede after the pain had gone, without gain. It would advance only with the uterus, the protrusion being governed more by the force of the abdominal walls than by the uterus itself.

Nothing daunted, however, I determined to give the natural powers every chance, as is my custom, and, having patience, not to "meddle" too much. The pains kept up well, and there were no signs of exhaustion.

At the end of the second hour, there was still only slight advancement. The head was still clasped by the os, but had not included the brows. Passing my finger up by the side of the head, I felt a hard, unyielding cordon, which seemed to embrace the fœtus around the chest, and placing my hands flatly, as in palpation, over the abdomen, during pain, I felt the fundus contract violently, and very little motion of the lower half of the uterus.

At five o'clock—four hours having elapsed—there were no signs of early delivery. The pains were active, and almost continuous, and yet the head had advanced but little.

Still having confidence in the powers of Nature to overcome the difficulty, to "tire out" the circular fibres, I concluded to wait another hour before making any further interference.

At six o'clock, the case not progressing satisfactorily, I administered chloroform and applied the forceps.

The chloroform was not given to complete insensibility, as I hoped to get sufficient relaxation without going so far; but it was continued for nearly two hours, during which time I used traction with the forceps, gradually but forcibly, teasing as it were, little by little, until about eight o'clock, when, fortunately, the child was delivered, after seven hours' hard labor. The child was asphyxiated, but soon revived.

Finding the patient was bleeding considerably, I at once introduced my hand to deliver the placenta, but found I could not reach it. The uterus was firmly contracted around the middle, and I could not get a finger through the small opening. I endeavored to overcome the stricture with all the power I could muster. I struggled on without relaxing my hold, one hand on the abdomen and the other in the uterus, and with main force boring my fingers one by one, and little by little into the stricture. After a great deal of labor and fatigue, being myself almost exhausted from the effort, and in a predicament in which I had no time, and hardly a thought, to send for aid; while the patient was bleeding profusely, the blood literally saturating the bed, and running in pools on the floor, I finally succeeded in getting my hand through the stricture, dislodging the placenta, which was attached to the fundus, and delivering it.

The patient was blanched, almost pulseless, with sighing respiration, and could not speak above a whisper.

After the use of ice, friction, ergot, stimulants, and application of the binder, the uterus having contracted well, the hemorrhage ceased, and the patient eventually had a good recovery.

Never before in my life had I been placed in such a strait, or compelled single-handed to contend against such odds, and I think never since, and it is not often the termination of such a case is so fortunate.

ON THE HISTORY AND LAWS OF THERAPEUTICS.

By JOHN C. PETERS, M.D.,

NEW YORK.

Dr. Edward R. Squibb, in his "Ephemeris of Materia Medica and Therapeutics" for May, 1882, page 70, says:

"A physician who believes in *opposing* the tendencies of disease by agencies which *counteract* such tendencies, can never get any help from consulting with one of *directly opposite* doctrines—one who believes that *like cures like*. Neither can the latter get any help from the former. In any consultation between the two, one or the other, as the first step, *must* (?!) give up the principles upon which his practice is based. The patient cannot have the alleged benefits of both, because they are in *antagonism* (2?!)"

In the above quotation the italics are mine, and also the question and exclamation marks. Dr. Squibb seems to take it for granted that there is only one law in therapeutics, and that is *contraria contrariis curantur*, or the cure by opposition, antagonism, counteraction, or perhaps neutralization. But diseases are cured in many different ways. Even Hippocrates, in his "Treatise on Ancient Medicine," says: "*Diseases are sometimes cured by contraries, sometimes by similars, and sometimes by remedies which have neither similitude nor antagonism.*"

Although Hippocrates was born B.C. 460, his opportunities for the observation and study of disease and its history had been abundant. He was brought up among the Asclepiadæ who were attached to the Temple of Cos; from a very early period of his life had access to all the records which were accumulated there, besides seeing numberless sick persons. He was also the eighteenth in lineal descent from a family of physicians, and a pupil of Democritus, Heraclitus, and Herodicus, who were among the

most illustrious followers of Pythagoras. He lived in the age of Pericles and was his physician, and was the friend and medical adviser of Plato, Socrates, Sophocles, Aristides, Phidias, Praxiteles, and others, such as Eschylus, Euripides, Herodotus, Thucydides, Demosthenes, and Epaminondas.

GALEN, born A.D. 131, established the one-sided laws: "*Health is maintained by supplying similars with similars; Disease is overcome by opposing contraries to contraries.*"

PARACELSUS, born A.D. 1493, proclaimed: "*Contraria contrariis is false,* and never did hold true in medicine. It is well done when we oppose like to like. Know all men that like attacks its like and never its contrary."

HAHNEMANN, born A.D. 1755, or one hundred and twenty-seven years ago, perpetuated the system of Paracelsus, aided by mesmerism, magnetism, and other frivolities.

The great mass of the medical profession have followed the rules of Hippocrates. It has never come under the yoke of any one system or law of therapeutics. Observation and experience have been its main guides, and hypothesis and false theories have only been its amusements and recreations, not its masters.

More than twenty years ago I adopted the broad and pure principles of Hippocrates after abundant opportunities of seeing recoveries from disease, both here and abroad, in many, perhaps all probable ways, viz.: by expectancy, or the *vis medicatrix naturæ*, by regular and homœopathic treatment. Hippocrates simply makes a statement of fact; I thought and still believe that I hit upon an explanation or true theory, *i.e.*, a legitimate deduction from many facts, not contradicted by other and equally well substantiated facts, which may thus be summed up: OPPOSITION or antagonism is merely the *greatest* possible amount or *degree of difference.* SIMILARITY is not *identity*, but always includes some difference, and may be defined as the *least or lesser degree of difference.* DIFFERENCE is neither antagonism nor similarity, but may, often does, include more or less of both. All cures take place by bringing about an alteration or change in the action of the disease, or by substituting a differential or alterative action. The remedy must always act differently, and this difference may be so great as to amount to antagonism, or so small as to approach similarity. The true theory and practice of medicine is alterative or substitutive. Remedies which act somewhat similarly, yet sufficiently different from the action of the disease, may and must cure, provided the dose and power of the remedy be great enough to alter or change, or substitute itself for the action of the disease; because only something different can alter or change, or counteract, or substitute itself. Two different actions cannot go on at the same time, in the same place. Thus, theoretically, homœopathy, or like cures like, is absolutely incorrect and untrue. Practically, it may be occasionally available. It, at its best, is only a fragment of a far greater and broader law, that of alterative or differential, or substitutive action. It may be regarded as the shadow of a truth, or the smallest end of the tail of the allopathic rite. Infinitesimal doses are absolutely inoperative, and all so-called cures by them must be regarded as accidental or fortunate recoveries. Those homœopaths who use tangible doses must be regarded as fractious and unreasonable allopaths. Those who use the remedies and doses of the regular school may be looked upon as erring brethren who have placed themselves in such a false position that they can only be rescued by great kindness and consideration on the part of their more numerous and powerful fellow-practitioners.

All the great modern advances in therapeutics have been made in the regular school, which must be regarded as the newest, most progressive, and by far the most scientific one. Homœopathy has made no advances in its own direction during the last twenty-five years, and must be regarded as an old, almost effete, and dying system, which would long ago have ceased to exist as a school if its adherents had not adopted so much from the regular school.

Progress of Medical Science.

IMPORTANCE OF EARLY DIAGNOSIS AND TREATMENT OF CARIES OF THE SPINE.—The importance of detecting spinal caries is urged by Dr. Edmund Owen, Surgeon to St. Mary's Hospital, etc. He finds that very frequently caries is not diagnosticated until the spine has assumed the typical angular deformity, whereas treatment of its cause should aim at precluding just that deformity. He draws as parallel instances the danger of delay in forming a diagnosis in knee-joint inflammation until after the typical "fiddler's bow" flexion is attained or the equally reprehensible delay in diagnosticating and operating for mammary scirrhus until the axillary glands become enlarged. In regard to treatment, Dr. Owen is of the opinion that when taken during the inflammatory stage, at the onset, complete rest on a hard mattress bed for a few weeks will suffice. If of later detection, rest followed by a plaster-of-Paris jacket, moulded to the form from the great trochanters to the axilla, will usually prove successful. The author is in favor of the plaster jacket as described and applied by Dr. Sayre of this city, above all others.—*British Medical Journal*, May 13, 1882.

IODOFORM IN ENLARGED AND ULCERATED TONSILS.—Dr. Henry describes a number of cases of tonsillar hypertrophy and ulceration which he claims to have cured by the use of iodoform in the form of spray. He was thus able to get the local effects of a strong solution, made by dissolving the powder in ten parts of strong sulphuric ether. He says that the value of iodoform is now conceded by all those who have had any experience in its use in this class of affections. The difficulties in depositing it on the surface of the glands have deterred many from adopting it in every-day practice. It must be admitted that on this account it has not met with the universal adoption it really deserves. In powder it is easily deposited over the surface of a wound, or an etherial solution can be passed over a surface that is exposed to the air; but this is difficult in the case of the tonsils and pharynx, and especially over the posterior portion of the tonsils. To be "done well," and to accomplish the purpose with the least pain and annoyance to the patient, it must be "done quickly," almost instantaneously. The use of very strong, specially constructed spray-tubes and the use of compressed air, with a very heavy pressure, appears to be necessary for this purpose. His own apparatus was constructed by Dr. Saas. Three such tubes are essential—one turned downward, one straight, and the third turned upward. With the first, the

larynx and surrounding lower parts can be treated; with the straight tube the middle part of the throat, pharynx, fauces, palate, and anterior portion of the tonsils can be sprayed. The posterior portion of the tonsils can only be sprayed with the tube with the downward curve. To do this well the patient must be artificially excited to the effort at retching. By so doing the tonsils are turned forward and sideways, thus enabling the operator to pass the curved tube behind the posterior portion of the glands. In some this effort at retching is involuntary on the slightest provocation. It can be easily induced by tickling the palate with the end of the tube. The deposit of the iodoform with the apparatus described is almost instantaneous, and is easily controlled, and can be directed to any spot. With the first expiration of air following the withdrawal of the tube, the ether is evaporated and expelled, leaving the iodoform well impressed on the glands and surrounding mucous surfaces. The coating is of a pale yellow color, and with the evaporation of the ether all unpleasant sensation is removed. The slight pungent taste and odor of the ether passes off entirely with a few fresh inspirations and expirations. Care must be taken with the tubes, for they are easily filled up with crystals that are difficult of removal. When the iodoform is first exposed to the action of the ether in the proportion mentioned, it is perfectly soluble. When the ether has been evaporated the remaining iodoform in the tubes crystallizes, and is not again soluble to the same extent.—*New England Med. Monthly*, June 15, 1882.

The Length of the Intestine, according to experiments of Tarenetzky, is, to the length of the body: In a five months' embryo, 1 to 4.2; in the infant at birth, 1 to 5.9; in infants under one year, 1 to 6.6; in children up to the sixteenth year, 1 to 7.6; in adults, 1 to 7.2. The body length was measured from the vortex of the skull to the upper border of the coccyx. In old age the intestine is relatively shorter.

Prodromata of Phthisis.—Dr. Coiffier (*Lyon Médical*, December, 1881) is inclined to believe that when a clean tongue coexists with a pulse of eighty-five it is an almost certain prodromus of pulmonary phthisis. When found in persons between eighteen and thirty years of age, who seem to be in excellent health, Dr. Coiffier regards such coexistent symptoms as evidence that tubercular deposit has already occurred.—*Chicago Medical Review.*

A New Antipyretic.—Macalline, an alkaloid obtained from the bark of the macallo, a tree which grows in Yucatan, is recommended by Dr. Rosado as superior to quinine in the treatment of intermittent and remittent fevers.

Lutidine as an Antidote for Strychnia.—Messrs. Greville Williams and Waters have discovered (*British Medical Journal*) an antidote for strychnia in the organic base, first prepared by the former, by distilling cinchona with caustic potash, and to which he assigned the name *beta* lutidine. Having ascertained, by experiments upon frogs, that *beta* lutidine causes a distinct increase in the tonicity of both cardiac and voluntary muscular tissues; also retardation of the heart's beat; that it arrests the inhibitory power of the vagus; and that by its action upon the nerve-cells of the spinal cord, it, in the first place, lengthens the time of reflex action, and then arrests that function; they proceeded to test its direct counter-action to strychnia. The brains of frogs were destroyed in the usual way. An animal was then treated with *beta* lutidine till reflex action disappeared, when the subsequent administration of strychnia was not followed by the usual results. To another frog strychnia was given till strychnia tetanus was produced, when it was found that the subsequent administration of lutidine caused the tetanus to pass off. The almost simultaneous administration of the two bases was not followed by tetanus. It is not unlikely that a substance so powerful will have some positive therapeutical value.

Statistics of Insanity in the United States.—Dr. C. L. Dana gives (*Journal of Nervous and Mental Diseases*, April, 1882) the following statistics regarding the insane in this country: We had in 1880, in round numbers, 89,000 (to 96,000) insane, which gives a ratio of 1-570 (1-520) of the population. The census ratio in 1860 was 1-1,310; in 1870, 1-1,100; in 1875, 1-953. Our population increased in the decade 1870 to 1880 about 26 per cent., while our insane population has apparently increased over 100 per cent. As regards the *distribution of insanity* and of its *increase*, the proportion of insane is greatest in New England, where the ratio is 1 to 357. Here, however, the rate of increase is becoming slower. In proportionate number of insane, after the New England and Pacific States, come the Middle States (1 to 446), then the Western (1 to 570), and then the Southern (1 to 780). As regards asylum accommodation: In 1881 we had 74 State and 14 large private asylums, with a capacity approximately for 31,900, but holding 39,145. At a very low estimate, therefore, our asylums are overcrowded to the extent of 10,000 patients, while there are about 50,000 who are not in any asylums at all. Regarding the cost of asylums: We have about $40,000,000 invested in these institutions, at an average cost of over half a million apiece. It takes about $8,000,000 a year to run them, or $82,000 for each institution, not including interest. If we should add interest the total annual expenditure for the care of the insane amounts to $12,000,000. The annual cost per patient has been variously estimated at from $166 to $316.

Differential Staining of Nucleated Blood Corpuscles.—Dr. Allen T. Moore, of Ann Harbor, Mich., describes and figures (*The Microscope*) his method of double staining of nucleated (red) blood-corpuscles. He prepares two fluids for this purpose, called A and B. The first, A, is composed of eosin, gr. v.; aquæ distil, ʒ iv.; alcohol, ʒ iv. The fluid B is composed of methyl analin green, gr. v.; aquæ distil, ℥ i. The blood is spread upon a slide by placing a drop upon one end and quickly drawing the smooth edge of another slide over it. When the corpuscles are thoroughly dry the slide should be flooded with stain A. This should be allowed to remain on for about three minutes. It is then washed in clean water and flooded before dry with stain B. In two minutes the slide should again be washed and set away to dry. When dry a drop of Canada balsam is put upon the blood, a cover glass applied, etc. The red corpuscles will now be found to be stained red, while the nuclei and leucocytes are stained green.

Self-Hypnotization as a Remedy for Sleeplessness.—Dr. B. Greidenburg relates (*St. Petersburg Medicinische Wochensch.*) the history of a patient with athetosis, who suffered from obstinate insomnia. He used to get relief finally by fixing a light so that its reflection was visible in a glass of water. After gazing fixedly upon this he, according to Greidenburg, would fall off in a hypnotic condition and sleep.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, August 5, 1882.

THE SOCIAL RELATION OF THE DOCTOR TO HIS PATIENT.

So seldom are things said which directly concern the physician himself in his relations to his patients and neighbors, that we see no reason why any occasion for so doing, as will appear further on, should be neglected. Every medical man formulates for himself a set of rules for guidance in the so-called social treatment of his patients, and instinctively falls into a line of conduct which fits in turn the requirements of the pauper and the millionnaire, and makes him, as the physician, the right man in the right place, no matter to whom he may be summoned. Some men succeed in this respect better than others. Indeed, the disposition to adapt one's self to circumstances, the faculty of being agreeable at all times, and of inspiring confidence among those who in their due emergencies look to a physician for help, are oftentimes more necessary to the would-be successful man than a thorough knowledge of his art. The patient being better able to judge whether or no his physician is a gentleman than a well-educated medical man, will be most inclined to make a choice in the easiest and most natural manner. Hence it follows that the most successful practitioner is not always the most learned man. It is a pity that the ordinary condition of success does not oftener couple itself with sound scientific attainments, that practical tact so frequently dodges ahead of solid worth, and so invariably wins in the life race. But the rule is otherwise, as most of us know. In every community there are examples of success and unsuccess which fit both of these extremes. There, for instance, is the affable man, who is loved by the children, adored by their mothers, and trusted by their fathers, whose ignorance of his profession is never once suspected, and who rides into a lucrative and pleasant practice, while his brusque, matter-of-fact, and scientific neighbor is almost starving. Every one who knows how much sunshine is wanted in a sick room, can hardly blame the patient for his preferences.

It is an old and a true saw, as applied to medical practice, that faith is half the battle. The man who can inspire the proper amount of confidence in his skill has no occasion for the multiplication of prescriptions. To do this effectually with all classes of patients requires a rare knowledge of human nature, and a wide range of adaptability to attending conditions. Without some of the necessary tact to such an end medical knowledge does not avail much. Patients will be suited in their own way. Coarseness in a physician is not tolerated any more as an eccentricity of greatness. The Abernethy's of to-day are at a discount, and even their superior learning cannot gain an entrance for them into refined and polite society. Patients, now-a-days, do not think it necessary to have their little social preferences ignored even by the man who may be able to save their lives. But this is well enough known not to need special reiteration here, save for the excuse of calling attention to an interesting and instructive little work,[1] lately published, devoted to the general consideration of the social relations of the physician to his patient.

The worldly man is, as a rule, a man of experience. He does not usually become wise in his day and generation until the day is pretty well advanced, and his generation under quite a good headway. Hence this knowledge, so difficult of attainment and so slow of acquirement, has a peculiar value to its possessor. The physician who can fortunately gain it before his pitcher is broken at the fountain, or his windows become darkened, is generally the envy of his fellows, because he starts well and, as a rule, comes out ahead in the end. He can enjoy his bread before the grinders at the mill are few, and can get near the hilltop before the grasshopper becomes a burden.

It would seem that the importance of the knowledge of which mention has been made, is not sufficiently appreciated and that, as a rule, the gentler graces and dignified deportment are not sufficiently cared for. In the fierce struggle for professional distinction, the desire to be informed upon the latest surgical eviceration, the determination to see the latest bacillus and, if possible, to discover another; the ambition to wrestle with the last problem of vaccination, and in all things professional to do and dare, and still go on, are so overpowering that all else appears to be lost sight of.

Truly says our author in his entertaining and instructive brochure:

"Professional tact and business sagacity are as necessary to the physician as the mariner's compass

[1] The Physician Himself and what He should add to the Strictly Scientific. By D. W. Cathell, M.D., late Professor of Pathology in College of Physicians and Surgeons, Baltimore, etc. Baltimore: Cushings & Bailey, 1882. 8vo, pp. 194.

is to the navigator. There are gentlemen in the ranks of our profession who are perfectly acquainted with the scientific aspects of medicine, and can tell you what to do for almost every ailment that affects humanity—who, nevertheless, after earnest trial, have never gotten either reputation or practice, because they lack professional tact and business sagacity; and there is nothing more pitiful than to see a worthy physician, deficient in these qualities, waiting year after year for practice that never comes."

The question, from this standpoint, narrows itself to what shall be added to the strictly scientific education of the physician to make his success in practice more certain, more rapid, and more complete than is usually the case.

In advising the reader to this end, Dr. Cathell goes over a great deal of ground. It is not to our purpose to follow him step by step, but rather to take a general look over the field and here and there gather specimens of the author's experience of men and things which may serve to give an idea of his work as a whole. So much depends upon the man himself and his surroundings, that we are not surprised that the author is so plain spoken on the matter of personal make-up. Happily this advice is not needed save in quite exceptional cases, but its importance cannot be overestimated even by the man of most fastidious taste. In fact, it is generally through this medium that the doctor makes one, at least, of his earlier impressions upon his patient.

"If you dress well, people will employ you more readily, accord you more confidence, expect a larger bill, and will pay it more willingly. You never heard of a bank swindler, or a confidence man, or a counterfeiter, or a pseudo gentleman of any kind, who dressed shabbily or appeared coarse. Such people are all close students of human nature, and no matter how abandoned they are, no matter how tarnished their characters, nor how blackened their hearts, they manage to hide their deformities as with a veil from all but the few that know of their true characters by assuming the dress and manners of gentlemen. Now, if genteel dress and polished manners can do so much for such fallen specimens of mankind, how much greater influence must they exert for those who are truly gentlemen and members of a lofty profession." And the same remarks apply to the appearance of the office, the style of the equipage, the genteel manner of living, and even the character of the sign at the door-post. It is beyond question that nothing can be lost in a dignified appearance and correspondingly tasteful surroundings.

Generally the person who is sick is uncompromisingly æsthetic, and it is to such that the physician must minister to in more ways than one. It is sometimes quite hard to convince even well folk that the dinner is not particularly tasty at a well arranged table and that the material and shape of the glass has not a great deal to do with the flavor of the wine. But sick people are much more unreasonable, and we are taught that we should be always ready to humor them.

In all this endeavor to be pleasing, however, there may be a danger of overstepping the mark, by being tempted to gossip. As well said by the author, when you have finished talking to the patient about his case, nothing more and nothing less, your visit is virtually at an end. And here the necessity of minute examinations of the patient cannot be too strongly insisted upon. A patient or his friends can never be plied with too many questions concerning possible symptoms, while a neglect to ask what may by them be considered important is, as many physicians have known to their sorrow, fatal to a real confidence in their skill.

It need hardly be said that in this little work, which contains so much, the discussion of the matter of pecuniary relations of patients to the doctor are not in any wise neglected. And with a quotation or two on this point we reluctantly close, at least for the present, our rather discursive remarks upon the general subject under consideration.

After referring to the fact that pure professional devotion will not be considered, by the butcher and baker, as a good reason why the doctor and his family should be fed for nothing, and that man, no matter how scientific and disinterestedly good, cannot live on philanthropy alone, the reader is prepared for the hard and rather unpoetical statement that "the nearer your financial department approaches the cash system the better for you and your family. It is often more advisable even to submit to a reduction in a bill for cash than to let the account stand and run the risk of losing it. After settling promptly, many patients will feel free to send for you again, and make another bill, even in moderate sickness, instead of dallying with home remedies or quack medicines. You should present your bills while they are small and your services are still vividly remembered. If you are neglectful or shamefaced, and do not send your bills promptly, it will create a belief that you are either not dependent on your practice for a living or that you do not hold this or that person to your business rule, or are not uneasy about what *they* owe you, or that you are rich and do not need money, and if you foster such notions a bad system will grow up around you and great and irreparable loss will result. . . . Besides, time effaces details and recollections of numbers of visits, the doctor's watchings, cares, and anxieties are also forgotten, and the bill, although really moderate, is apt to look large. All these considerations combined are apt to make people feel, when they do pay an old bill, somewhat as if they were doing a generous thing, and making the doctor a present of that amount."

With all of which every sensible man must agree. We believe that there is nothing which will more surely make the heart of the expectant doctor sick, than the contemplation of his lost opportunities in the collection of long-standing accounts. But the doctor's widow and family will be destined to know even more about it than he does, when the time comes for them to square accounts between his reputation and their poverty.

HOTEL DOCTORS.

A LETTER has appeared in a hotel paper upon the subject of "hotel doctors." The writer is a gentleman who had been travelling with his family. He was taken sick at a hotel and was attended by the resident physician. There is an indignant description of the way in which he was, as he claims, "robbed" by the doctor. The medical service furnished was trivial, yet the physician persisted in calling often and finally sent in a very large bill. It is, we are told, ingeniously arranged so that the doctor's bill can be collected at the desk. There is no other way than to pay, therefore—a hardship indeed to most people. The case related by the correspondent in question is unfortunately only one out of a large number. There have been, indeed, so many hotel doctors who have used every expedient and excuse to increase their charges that the term hotel—as attached to a physician—has begun to carry some reproach. This is unfortunate, because a large number, and probably the majority of this class are, by no means extortionate, but are gentlemen having more than ordinary professional skill and social standing.

There is something in the environment of a modern fashionable hotel, which explains, if it does not palliate the rapaciousness of its physician. The hotel-keeper uses every means which is legally possible to wring money out of his guests. And if the hotel doctor, whose expenses are very great, imbibes some of the same spirit it is not perhaps to be wondered at.

The hotel doctor who practises at summer resorts is rather a modern institution. But the same stories of unreasonable charges are circulated about him. We can say the same thing regarding these accusations: that in some cases they are very just, in more cases they are only what the physician's expenses oblige him to ask. The convenience of having a medical man in a hotel must be paid for. But hotel doctors should remember that they have no right to bring the profession into reproach by tricky devices for increasing their bills. Good pay for good service rendered is a proper motto for this as well as every other class of medical men.

THE MINIMUM LIMIT OF EXERCISE.

FREDERICK THE GREAT is reported to have said: "When I consider the physical structure of man, it appears to me as if nature had formed us rather to be postilions than sedentary men of letters." The belief that such was nature's real purpose seems to have taken hold of an eminent London hygienist, Dr. B. W. Richardson. At a recent lecture, delivered before the Ladies' Sanitary Association, he declared it essential, as a matter of principle, that eight hours of the day be devoted to exercise, care being taken only to avoid "monotony of movement." Such a statement has naturally excited much criticism and incredulity. The London *Spectator*, commenting upon it, asks why the medical profession does not formulate its opinion about the indispensable minimum of exercise, as was done some time ago about the expedient maximum of alcohol.

Such a formula would certainly be a great sanitary help and convenience, but it is impossible to give it with any preciseness. The minimum amount of exercise consistent with good health must vary with the habit, occupation, and the physical organization of the individual. We do not know that any one can come any nearer to a correct formula than old Christopher Hufeland, who, a hundred years ago, wrote: "I consider it, therefore, an indispensable law of longevity that one should exercise at least an hour every day in the open air. The most healthful time is before meals, or from three to four hours after." Horseback riding, dancing, gymnastic exercise, and walking are the measures which he recommends in detail; and he adds what every one admits, that that exercise is best which interests the mind as well as occupies the body.

Persons whose physique or occupation is peculiar must depart from the above rule, but how or to what extent a study of each case is necessary to determine.

THE ANTIPYRETIC ACTION OF ALCOHOL.

DR. L. GREBE communicates the results of some experiments upon the antipyretic action of alcohol (*Archiv. für wissensch. u. pract. Thierheilkunde*).

A large dog was taken, and hourly observations of its temperature made, so as to obtain the normal daily curve. The same observations were repeated on two dogs, and, at the same time, the effect of giving cold water, in three to five-ounce doses, was noted. A dog, weighing twenty-one pounds, had then an artificial fever produced by the subcutaneous injection of pus. Fifty grammes of alcohol and one hundred grammes of water were then given, and the temperature noted every half hour. There was a steady fall, during the next three and a half hours, from 40° C. to 39.1° C. Next day the temperature had risen to 40.6° C. One hundred grammes of alcohol were given. It was followed by a steady fall, which, in two and a half hours, amounted to 1.5° C. Another dog was treated in the same way, with similar results.

The next series of experiments was upon horses.

The first animal was suffering from an inflammation of the joint, which excited a fever amounting to 40.5° C. (105° F.). The horse was given one hundred grammes of rum, corresponding to a little over an ounce of pure alcohol, every two hours. There was a temporary increase in temperature of between 1° F. and 4° F. The total effect, however, after twenty-four hours, was a reduction of temperature to 38° C., giving a fall of 2.5° C. (about 4.5° F.).

This experiment was repeated upon four other horses, the conditions being varied somewhat.

The conclusions drawn by Dr. Grebe are as follows:

First.—The action of alcohol upon the temperature varies, according as it is given, in small or large doses.

Second.—In small and moderate doses alcohol, when given to animals with fever, produces an immediate slight increase in the bodily temperature, amounting to about 1° F.

Third.—This increase is of short duration, and is followed by a fall of temperature to a lower level than before the alcohol was taken.

Fourth.—In large, but not poisonous doses, alcohol depresses the temperature without any previous rise. The fall may amount to several degrees.

Fifth.—A long-continued fall of temperature can only be obtained by giving large doses at regular intervals. Given in this manner, alcohol is a true antipyretic.

Sixth.—Alcohol has its antipyretic effect by virtue of its power to hinder or lessen oxydation. The author states that in fever the red blood-corpuscles are diminished in number, but that by giving alcohol in antipyretic doses they reach their normal amount again. This assertion, first made by Manässein, was confirmed by Grebe.

The various theories offered to explain the heat-depressing powers of alcohol are discussed by our author. He is inclined to give the most weight to the power which alcohol has of delaying tissue-changes. Grebe's conclusions are in harmony with those of most of the other very numerous investigators in this line.

DR. KINLOCH'S CASE OF DEATH FROM CHLOROFORM.

The case of death from chloroform reported by Dr. Kinloch, of Charleston, S. C., in another column, is a notable one not only on account of some very unjust criticisms concerning it in the secular press, but also as furnishing another proof of the danger of chloroform even in the most skilful hands. Here was an instance in which a distinguished surgeon, of large and varied experience, used a remedy which he had trusted many hundreds of times before, and yet in which, in the twinkling of an eye, the patient passed over to death.

In the South, as abroad, chloroform is the favorite anæsthetic, but the moral to be drawn from each fatal case of narcosis from its use is always the same. The issue is met by our correspondent in a straightforward and manly way, and the charge by the daily press, that any concealment was attempted by Dr. Kinloch, must be looked upon by all who know him as simply absurd. We, in common with the profession at large, sincerely sympathize with him in his mishap.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 10, 1882.

DR. E. C. SEGUIN, PRESIDENT, IN THE CHAIR.

DR. N. BOZEMAN presented three specimens:

THE UTERUS CONTAINING SEVERAL SUBPERITONEAL FIBROIDS AND SUBMUCOUS POLYPI—AN OVARY ILLUSTRATING COMMENCING CYSTIC DEGENERATION—ONE OF THE FEMORAL VEINS CONTAINING AN OLD THROMBUS.

All the specimens were removed from the body of a woman, upon whom he performed ovariotomy April 22, 1882. The following was the history of the case: The patient was fifty-two years of age, and had always enjoyed good health until the summer of 1880, when she first noticed an enlargement of the abdomen, which grew with considerable rapidity, occasioned considerable distress, until the summer of 1881, when she consulted Dr. Smith, of St. Lawrence County, N. Y., who diagnosticated ovarian tumor, and removed, by tapping, twenty pounds of fluid, having the consistence and color of syrup of tolu. The tapping was repeated seven months afterward and twenty-eight pounds of fluid, having a similar color and consistence, were removed. In the latter part of February last, he drew off thirty-five pounds, making in all eighty-three pounds of fluid removed by tapping.

On the 11th of April she entered Dr. Bozeman's service at the Woman's Hospital. At that time she was much emaciated, her abdomen was symmetrically enlarged, measured forty-four inches in circumference, fluctuation was distinct, and there was dulness over the left lumbar region. Diagnosis of ovarian tumor was made, and the patient was put upon treatment preparatory for ovariotomy, which was performed on April 22, 1882. The tumor was exposed, and there being but adhesions, the large cyst was removed, which, together with the fluid it contained, weighed 40¼ pounds. It had a broad pedicle which was secured in the usual manner by a double ligature. On examination of the right ovary it was found to be about the size of a pullet's egg and fluctuating. It was removed in the usual manner, and found to have a multilocular cyst in the centre lined with ciliated epithelium, the walls consisting of the stroma of the organ. It contained fluid of the same character as that found in the large cyst.

The uterus was examined and found to have some half dozen subperitoneal fibroids, varying in size from that of a pea to a walnut, and occupying the fundus and anterior wall. It was not removed. The peritoneum was carefully cleansed. There was no hemorrhage, but considerable "sweating" from the serous surfaces. The external incision was closed

with interrupted silk sutures, and antiseptic dressings applied. The patient was returned to the bed in fair condition. Temperature, 99⅘° F.; pulse, 108; and respiration, 24. The case progressed favorably until the seventh day when she was removed from the cottage to the building, her highest temperature being 100⅘° F., the average being 99⅕° F.; the highest pulse 108, the average 80 to 90. The after-treatment consisted of nourishment, quinine, brandy, and opium.

On the third day a peculiar symptom developed, namely, *numbness and feeling of weight in the right arm and leg*, so that the patient could not move either of them. Her mental condition at the same time seemed sluggish. Examination of the afflicted limbs revealed nothing peculiar. There was some difficulty of articulation, which continued for twenty-four hours. The numbness continued more or less for twenty-four hours. *There was at no time*, either *before or after the operation, œdema of the extremities*, a remarkable fact when taken in connection with a condition to be mentioned hereafter. During the patient's stay in the cottage the urine was examined daily, and was normal. On the day she was removed to the building, the pulse and temperature were normal. The sutures were removed by Dr. Goldthwaite and the wound looked well, although there was slight suppuration at the lower angle. On the ninth day, two days after removal to the building, the temperature rose to 103° F., and pulse to 120. There was no chill. Under the use of quinine and the application of the ice-coil to the abdomen, the temperature, within eight hours, fell to 99⅕° F., pulse to 99. On the next day the temperature rose, but fell under the use of the coil, and so continued varying from 99⅕° F. to 102⅘° F., until the 15th day, when the pulse rose to 160 and the patient died. In the meantime the external wound had healed, and there was no pain on palpating the abdomen.

At the autopsy made by Dr. Welch, it was found, on prolonging the original incision in the abdomen, that the recti muscles were honeycombed with cavities, containing a thick, greenish yellow, acrid pus. The parietal and visceral layers of the peritoneum were glued together, and coated with a thick fibro-purulent exudation. The intestines were matted together. The spleen contained no infarctions. The kidneys were normal. The stomach presented the lesions of chronic gastritis, and Peyer's patches exhibited the shaven-beard appearance. Douglas' cul-de-sac was obliterated by adhesions. The rectum was deeply congested and considerably distended. The mucous membrane of the bladder was inflamed and covered with muco-purulent material. The uterus had the fibroids already mentioned, and its length was only slightly above the normal. From the mucous surface of the lower part of the cervical canal hung a small polypus; and at the fundus especially were small "fungosities" which were mostly sessile (one or two polypoid).

Both ovaries were absent. On the *left* side the pedicle was made up of the broad ligament, Fallopian tube, and ovarian ligament. The ligature was buried from sight by recent adhesions. One additional ligature was discovered on this side, including an adhesion. *Right* side: Pedicle included same structures as on opposite side, except the *round* ligament. The intestines were adherent to pelvic organs and to pedicles covered with similar exudation. There was about a litre of dirty purulent fluid in the peritoneal cavity, enclosed in separate cavities by adhesions. Tympanitis moderate.

Diaphragm pressed up to second intercostal space on right side to third space on left.

Heart: Small, but normal. Few atheromatous patches on mitral valves and at beginning of aorta.

Right lung: Old pleural adhesions. Emphysema well marked along anterior border. Some attendant œdema.

Left lung: Slight emphysema; hypostasis of inferior lobe. No infarctions.

A most interesting feature of the case was the presence of old thrombi in both femoral veins, the *left* being completely occluded, as was the corresponding *saphenous* vein, the *right* not entirely so. Extending from the two common iliacs up to the vena cava inferior, to a point two centimetres below the origin of the renal veins, was a parietal thrombus of comparatively recent origin, with an attendant *adhesive phlebitis*. In some places the lumen was entirely closed, in others a narrow channel was left. No evidences of embolism were found with such an extensive thrombosis. The pelvic plexuses were also thrombosed, even the smallest veins being occluded. The brain was not examined.

THE PRESIDENT remarked that the numbness and disturbance of articulation were very interesting symptoms, and the hemiplegia was susceptible of one or two explanations: (1) Embolism produced by detachment of some particles from diseased cardiac valves, or (2) minute emboli from the thrombosed veins went to the right side of the heart, through the pulmonary circulation to the left side of the heart, thence through the aorta to the left side of the brain. The occurrence of the last form of embolism is not generally recognized, but that it takes place has certainly been demonstrated by experiments on animals. The second variety of embolism serves to explain the hemiplegia that occurs in the puerperal state.

DR. A. F. LIAUTARD presented a specimen illustrating

FRACTURE OF THE SPINE IN THE DOG.

It was accompanied by the following history. In January, he received a small female pug, about six weeks old, which was rachitic, all the legs being deformed, the body emaciated, the head very large, the eyes prominent, and she was scarcely able to stand or take nourishment. She was so well bred that he endeavored to save her life, and she was fed with meat and beef extract, and given lime and salt. About the beginning of March she had developed into a handsome dog, in apparent health, with the exception of a general eczema, probably due to mode of feeding. One evening, early in March, she was suddenly seized with an epileptic fit, fell from the lap to the floor, and did not recover for several hours. After recovery she was completely paralyzed for forty-eight hours. She was nursed, and on the third day she could raise her head, moved one fore leg, then the other, and at the end of about a week seemed recovered from the loss of power except in the hind quarters, which from the dorso-lumbar articulation were entirely paralyzed. Nux vomica was administered and electricity applied. Sensation returned to the hind legs, they would move when irritated and she could carry them to the mouth and bite them, but she was unable to get up. If raised, she could not stand, and when held up, her vertebral column presented the normal outline from the neck backward as far as the posterior part of the back, where it suddenly raised and formed an upward curvature. All the parts below this point were

paralyzed. She was treated for four weeks, but in vain, and finally chloroform was given and a post-mortem examination made. All the internal organs were normal, except the intestines contained several lumbricoides, often the cause of epileptic fits in young dogs. The spinal column exhibited a fracture at the eleventh dorsal vertebra, and apparently no repair had taken place, due, probably, to the diseased condition of the bones.

DR. ROBERT NEWMAN presented

A TESTICLE,

with the following history.

C. W——, aged thirty, married, came under treatment March 15, 1882. He had been ailing since September last, but had been sick abed and under the medical advice of several practitioners for nearly three months. His right testicle was enlarged, swollen, and has caused great pain, sometimes even excruciating, preventing any sleep. His general condition is good. Bowels are costive; often has severe colic pains. The testicle is now much enlarged, hard, painful to the touch; epididymis is particularly affected. The whole organ has the form of a kidney, and is drawn upward; at times, when painful, the cord pulls the testicle up almost into the inguinal canal.

On palpation, an indefinite fluctuation is felt, like small cysts. After an examination, in which the organ has been handled, he always has an exacerbation of severe pain. There may be a slight amount of fluid in tunica vaginalis. Scrotum naturally a little stretched, to accommodate the enlarged testicle—is otherwise healthy. The left testicle is normal; there are no enlarged glands in inguinal regions. The cord is very hard, and has, to the touch, the appearance of a thick catgut, as tight as a string on a double bass. The beginning of the ailment was like an epididymitis. There is no syphilitic history. The symptoms exclude hernia and hydrocele. A positive diagnosis could not be made, but the symptoms are such to suspect carcinoma of the testicle.

Treatment relieved for a short time, but exacerbations followed soon after, so that in reality nothing was effected toward a cure. On the contrary, the patient got worse, with more severe pains and sleepless nights.

April 8th he was decidedly better, but on April 10th I found the scrotum enlarged to twice the size it had been at the former visit. The former state of the testicle was not altered, but an effusion of an uncertain character was added, resembling nearly a hernia. As nothing could be expected from treatment, extirpation of the organ was advised.

April 13th.—Operation in the presence and with the assistance of Drs. Rodenstein, Bryant, and Meier. No antiseptic precautions were used, except my usual habit to wash instruments and sponges used in a weak solution of carbolic acid. Ether was administered as an anæsthetic. Where the sudden effusion appeared, a small trocar was introduced, and three ounces of dark blood let out. Then a longitudinal incision was made in the anterior wall of the scrotum, and enlarged upward, in order to explore the cord. The tunica vaginalis was thickened, and contained more blood. Several small cysts, scattered about, were filled with a serous fluid. The testicle was enucleated, the cord tied high up in three parts with silk ligatures. Two vessels in scrotum had to be ligated. The wound was brought together with silver-wire sutures, and in the depending part a drainage-tube was inserted.

The rule as laid down in works of surgery, to separate the nerves of the cord, so as not to include it in the ligature, is a wise theory, but entirely impracticable. I never could trace these small nerves, and never have seen any ill effect from including it in the ligature. So in the present case the patient was free from any pain after the operation, and made a good recovery.

April 13th.—First dressing on the third day after operation. The wound had healed by first intention, except the place occupied by the drainage-tube.

On the fifth day half the silver-wire sutures and two ligatures were removed. On the seventh day the remaining wire sutures were cut out.

The strong ligature of the cord came away on the eighth, tenth, and seventeenth days.

May 9th.—Patient is well, walks about.

From the specimen you will see that the testicle has grown to a length of four inches; the epididymis is particularly enlarged and hardened. In the tunica vaginalis we find a large blood-clot with some gelatinous fluid intermingled; the membrane is so much stretched as to form a pouch like the cyst of a tumor. The tunica albuginea is thickened, and can be easily separated. The lobuli testis are rather softened, easily separated from each other, and emit to the touch a feeling of pultaceous matter. The arteries of the cord are enlarged, tough, and have a feeling as if atheromatous.

A satisfactory examination with the microscope, to ascertain the character of the neoplasm, has not been made, as the specimen has not hardened enough.

THE PRESIDENT asked Dr. Newman if he had searched carefully for the nerves in the cord.

DR. NEWMAN said that he had, and that in this case he was unable to detect anything which presented the appearance of nerve. In some cases he had seen possibly little fibres, but nothing destructive.

THE PRESIDENT said he inquired because a distinguished gentleman had proposed pressure upon the cord for neuralgia of the testis, and had claimed to have cured several cases in that manner, namely, by pressure upon the nerves. If, however, the nerves are not visible to the naked eye, perhaps the explanation was rather theoretical.

DR. NEWMAN also presented

SPECIMENS DISCHARGED FROM THE BOWELS,

with the following history:

Mrs. A. G——, aged twenty-six years; married three years; no children. Six years ago was kicked and trampled in abdomen by a man with heavy boots, which gave her pain and suffering for a long time.

April, 1881, the patient came under my care for membranous dysmenorrhœa.

June 21st.—There was a distinct tumor in left lumbar region, circumscribed, painful to the touch, but entirely disconnected with the uterus. It occupies a place, the boundaries of the transverse and descending colons; the same place which was injured six years ago by the heavy boots.

August 9th.—Patient in a letter states that two days ago she felt uneasy, and pain again in the left side. After some painful colic spasm, she felt something give way. Next morning a copious fluid was discharged from the uterus, after which she felt easier. (It is very doubtful that the discharge came from the uterus.) In October, 1881, menstruation appeared in regular time, but with pain, profuse

flooding, and the regular expulsion of membrane. Treatment was continued by dilatation of uterus, syringing cavity with carbolic acid solution, and application of Churchill's tincture of iodine.

The next month the menses appeared regular, without any pain or discharge of membrane.

Over four months she remained well. In March, 1882, she complained again of colic pains, and passing off of large pieces of membranes, which looked like the linings or pieces of membranes from intestines. Some of these pieces were preserved, and are the specimens presented here.

The interest in this case is the diagnosis, and this is the reason they are presented. The patient had membranous dysmenorrhœa, and was cured of it in due time. Simultaneously there was an independent tumor in the left side, which at times diminished and disappeared. The patient misled her physician by stating that the pieces had passed from the uterus, when in reality they were expelled by the alimentary canal. The question arose, whether the injury received six years ago had anything to do with the present ailment. The masses expelled could be only exfoliated parts of intestines, or foreign bodies. Dr. Peabody kindly examined the specimen microscopically, and reports as follows:

"March 27, 1882.

"Dear Doctor: The material in the bottle is without doubt food that has been bolted and subsequently passed, undigested. It contains many fragments of striped muscular fibre, much undigested connective tissue, and large masses of vegetable cells and fibres."

April.—The patient states that every other day she has severe pains, and the following morning those pieces came away. She remains under treatment. Her diet is very plain, and for weeks past she has not eaten any meat.

May.—Patient is decidedly improved, but passes still particles of the same nature from her bowels, off and on.

May 10th.—Saw her this morning, when she felt well in every respect, and no trace of the tumor is left.

EPITHELIOMA OF THE PENIS.

Dr. Willard Parker, Jr., presented a specimen, accompanied with the following history: A man, sixty-two years of age, with good family history, contracted a chancroid when twenty years of age. From that he recovered promptly under treatment, but has always had a spot upon the glans, which upon special exposure was peculiarly sensitive to irritation. Last December, soon after sexual intercourse, a point of tenderness developed upon the glans penis, which, although it did not present the appearance of a venereal sore, did not heal under treatment. The prepuce was exceedingly long, and although the sore seemed to improve somewhat, yet it never entirely healed. It was finally determined to administer ether, slit up the prepuce, and decide whether further operation should be performed or not, when the growth had been fully exposed to view. Accordingly, on April 3d, Dr. Hutchison, of Brooklyn, slit up the prepuce, found a large epitheliomatous growth, and removed the organ. The patient recovered from the operation rapidly and satisfactorily, and there remains a portion of the penis an inch and a half or two inches in length. The growth occupied almost the entire glans. It had been examined microscopically by Dr. Birdsall, who reported that it was typical epithelioma, nests of cells being present.

In looking up the literature of the subject, Dr. Parker found that Walsh had stated that out of between nine and ten thousand cases of cancer, he had found only ten of cancer of the penis, a degree of infrequency which to him was rather surprising.

Dr. J. C. Peters said that only a few cases had been published in the *Bulletin* of the Society, and he was surprised to find how rare the disease was and how difficult of diagnosis.

Dr. Carpenter had seen four specimens during the last year.

Dr. Liautard said it was a common affection among geldings.

PERITYPHLITIS—PERFORATION OF THE VERMIFORM APPENDIX BY A CHERRY-STONE.

Dr. F. Ferguson presented a specimen removed from the body of a young man, who was taken May 1, 1881, with violent pain in the right iliac region. He had been indiscreet in his general diet, and from the onset of the pain to within two or three days of his death had violent and persistent vomiting. His bowels had been frequently moved by medicine. On the ninth day of his sickness he came into the New York Hospital, and was described as being "cold and covered with a cold perspiration." His respiration was shallow, pulse feeble and rapid, and his face wore an anxious expression. Examination of the abdomen revealed a tumor extending from the right ileum upward to the extent of six inches, laterally four inches, exquisitely tender, and imparted to the touch a sensation of hardness and resistance on deep palpation. On the day following admission, the tumor disappeared, and there was an increase of the tympanites which existed when he entered the hospital, and a certain amount of resistance developed over the entire abdomen. The temperature on admission was 103° F., and it steadily increased until death, when it was $109\frac{4}{5}$° F.

The day before his sickness began, he ate freely of cherries, and was of the opinion that he had swallowed some of the stones. At the autopsy there were found considerable pus in the peritoneal cavity, recent lymph, and a large sac upon the right side filled with broken-down material. On close examination it was found that the wall of the ileum was extensively necrotic, the appendix vermiformis had been adherent to the side of the ileum, and the end of it was gangrenous, and in that region was a mass as large as a pea which was recognized as a cherry stone.

Dr. J. Lewis Smith presented a specimen of

INVAGINATION OF THE COLON,

for which he was indebted to Dr. Ewing. It was removed from the body of a negro girl, seven years of age, with the following history. Her parents were healthy, and she had been well until five months previous to her death, which occurred April 29, 1882. She first complained of abdominal pains, colicky in character, but not severe. These continued several weeks, increasing in frequency and severity, and Dr. Ewing was called in on March 13th. At that time, nor afterward, there was no marked febrile movement. During the interval between the colicky attacks she seemed to be healthy, although never entirely free from pain. Dr. Ewing had been led to suspect some displacement of the intestine, perhaps invagination. Dr. Smith saw the patient some four or five weeks before her death,

and they examined with reference to intussusception. There had, during the entire sickness, been diarrhœal evacuations from the bowels. They discovered no evidence of tumor.

There were also pains of a fugitive character in other parts of the body. There was not at any time marked vomiting. They were inclined to the opinion that she probably had intestinal catarrh with neuralgic pains. She gradually lost strength, stools of a thin brownish character continued, and death occurred from exhaustion. At the autopsy, a mass was found in the left side of the abdominal cavity measuring six or eight inches long, about three inches across, with a portion of small intestine protruding from it, and the caput coli with the ascending and transverse colon had disappeared. In the invagination were the head of the colon, the ascending and transverse portions and a part of the ileum. Dr. Smith thought it began by prolapse of the lower part of ileum, through the ileo-cæcal valve, dragging after it the caput coli, and then the colon. It was probably one of those cases which could have been relieved in the early stage, could diagnosis have been made, either by distention with gas or water or by laparotomy. Probably it existed two or three months before death, perhaps five months. The small intestine was excessively hyperæmic throughout its extent up to within ten inches of the invagination, and Dr. Smith thought the intense congestion was due to inflammation.

On a previous occasion he had studied the statistics of the subject, and noticed the fact that with intussusception occurring after two and one-half years of age there was some antecedent disease or condition that would be likely to cause disturbed action of the intestines, such as diarrhœa or constipation. It might be that the evidence of ileitis antedated the occurrence of the displacement.

Dr. F. V. White asked Dr. Smith which he had found most effectual in the treatment of invagination, gas or water?

Dr. Smith replied that he had been more successful with water than with gas or air.

Dr. Janeway remarked that it was difficult to decide how long an invagination had existed, or just how much occurred immediately preceding death. Perhaps by section of the specimen something might be found which would assist in explaining the condition, as, for example, an intestinal polypus. Periodicity in the occurrence of pains was a feature of these, as well as many other cases, without any influence whatever from malaria.

Dr. White referred to a case of invagination successfully treated by his father many years ago, by introducing the nozzle of a common pair of bellows into the rectum and distending the intestines with air.

PERICARDITIS ("HAIRY HEART") — FIBRO-PURULENT EXUDATION BETWEEN THE LEFT LUNG AND DIAPHRAGM — INTERSTITIAL NEPHRITIS WITHOUT ALBUMEN IN THE URINE—DEATH FROM URÆMIA.

Dr. B. Robinson presented the heart which illustrated the above lesion. The history of the case was furnished by Dr. W. C. Campbell, House Physician at St. Luke's Hospital. Chas. W. M——, seventy years of age, was brought to the hospital, April 15th, suffering from intense pain in the left lumbar region, intense dyspnœa, and slight cough without expectoration. Respiration 28, and shallow; pulse and temperature normal. Pleuritic friction sounds over the whole of the right side of the chest. Patient passed no urine during the night, and on the following morning well-marked symptoms of uræmia were developed. The catheter was introduced and twelve ounces of urine drawn, which had a specific gravity of 1025, acid, contained *no* albumen, but granular casts in abundance. He died in profound coma at 9 P.M.

At the autopsy, the right lung was found firmly bound down by old adhesions, and there was well-marked evidence of bronchitis and hypostatic congestion. The left lung had no adhesions except at the base, where there was a thick fibro-purulent exudation connecting it with the diaphragm. There was fibrous induration at the apex and the whole lung was the seat of hypostatic congestion.

The heart presented the lesions of pericarditis.

The kidneys were granular, deeply congested, and plainly were the seat of old interstitial nephritis.

An interesting point in the clinical history of the case was the occurrence of intense dyspnœa associated with symptoms of uræmic poisoning, and yet there was no albumen in the urine drawn from the bladder. Dr. Robinson thought that, in view of the condition of the kidneys, the dyspnœa was not due to the pleurisy, but was rather of the respiratory form described by Fournier, as occurring in cases of interstitial nephritis.

Dr. Robinson also presented a specimen illustrating well-marked

AORTIC AND MITRAL STENOSIS.

Chas. H. F——, fifty-two years of age, married, seaman, and for the last ten years a merchant. Family history of rheumatism, and father died of cardiac following frequent attacks. Thirty-five years ago the patient had a chancre and other symptoms of syphilis, but there have been no manifestations of the disease since. His habits were regular and temperate, and he was unusually strong and athletic. He had his first intimation of cardiac disease about thirty years ago, when palpitation developed after violent exertion or under excitement, and this occurred soon after a very severe strain in endeavoring to save himself while falling from the masthead. Ten years ago he had his first and only attack of acute articular rheumatism, the knees and ankles being affected. Six years ago palpitation became a more prominent symptom, and he gradually lost flesh and strength. Five weeks before admission he began to cough considerably, and had marked dyspnœa.

On admission he complained of frequent attacks of palpitation and intense dyspnœa, slight cough, nervous prostration, and dyspeptic symptoms. There were no central symptoms. The urine was somewhat diminished in quantity, specific gravity 1026, acid, and heavily loaded with urates and oxalate of lime.

On physical examination by Dr. Robinson, a blowing murmur was heard at the apex, in the axilla, but not behind, and with greatest intensity to the right of the left nipple, decreasing in intensity as the ear was carried upward, and finally disappearing at about the middle of the sternum. A similar murmur was heard at the base, most distinctly at the *second* intercostal space and to the right of the sternum, and propagated into the great vessels. Pulse small and compressible. No marked œdema, but intense dyspnœa. Diagnosis: aortic and mitral stenosis, with both heart-cavities enlarged. The dyspnœa was relieved temporarily by the administration of small doses of morphia hypodermically, and the

inhalation of oxygen. He died from sudden failure of heart-power, April 15th.

At the autopsy considerable fluid was found in both pleural cavities, hypostatic congestion of the lungs, adhesions at the right apex.

The heart weighed one pound and fifteen ounces. Both ventricles were greatly dilated. The wall of the left ventricle was extensively hypertrophied, that of the right thin. The aortic valves were bound together firmly and calcified; the orifice was markedly contracted. The flaps of the mitral valve were thickened, and showed some spots of ulceration. The orifice was slightly narrowed.

The kidneys and liver were congested. The specimen was interesting, because it exhibited lesions which explained the physical signs. At the same time it might be added that frequently similar pathological lesions were found associated with other clinical phenomena. For example, in a given case a murmur was heard that indicated mitral regurgitation, and after death there was stenosis, rather the condition that ordinarily gives rise to mitral insufficiency. To argue from the murmurs heard as to what pathological lesions would be found, was, in Dr. Robinson's opinion, to a certain extent a mistake.

Dr. Janeway remarked that the question of uræmic dyspnœa was one in which he had been much interested, and he had seen many cases in which severe dyspnœa existed without either cardiac or pulmonary disease to explain it. His rule was to invariably examine the urine in all cases of dyspnœa, and especially should it be done when dyspnœa occurred without disease of the heart or lungs. The first symptom of Bright's disease not infrequently was an attack of dyspnœa, and the case might require active and prompt treatment. In these cases Cheyne-Stokes respiration was frequently present. With regard to the specimen of mitral stenosis, it seemed to him to be important to distinguish between thickening of the mitral valves and pure mitral stenosis. When he could introduce two fingers, as in the specimen, he did not like to call it pure stenosis, but rather thickening of the mitral valves.

Again, the mitral leaflet might float up and give rise to presystolic murmur, which did not imply mitral stenosis, and it was difficult to judge as to which condition the murmur was due. This occurred not infrequently with mitral regurgitation.

NECROSIS OF THE SPINOUS PROCESSES OF THE VERTEBRÆ.

Dr. J. A. Wyeth presented the remains of three spinous processes, namely, the last cervical and the first and third dorsal vertebræ, removed on account of necrosis. There was an immense abscess, which was opened, and after the man had recovered from that somewhat, it was laid open throughout its entire extent, and necrosis of the spinous processes found. The diseased portion was removed, and the patient made a good recovery. The specimens were interesting, as illustrating necrosis of the spinous processes *without* disease of any other part of the vertebræ.

Dr. Wyeth also presented

A PIECE OF SILK THREAD WITH WHICH HE HAD LIGATED THE EXTERNAL PLANTAR ARTERY IN SYME'S AMPUTATION.

The operation wound was closed with carbolized sutures, united by first intention, and within two months the patient began to wear an artificial foot. He did well for five months, when an abscess formed and within two or three weeks the piece of ligature with which the artery had been secured appeared. Dr. Wyeth also referred to a case of ovariotomy in which thin abscesses formed some time after the operation, and finally the silk ligatures were discharged.

Dr. E. G. Janeway presented a specimen of

CYLINDRICAL EPITHELIOMA OF THE CÆCUM, WITH SECONDARY NODULES IN THE LIVER, OMENTUM, UTERUS, AND RIGHT LUNG.

They were removed from the body of a woman, sixty-six years of age, without history of cancerous disease, and who had always been healthy until four years before her death. For two years she had simply a feeling of fulness or distention in the side. During the last two years she had periodical attacks of vomiting, the material vomited sometimes being black and offensive. These attacks occurred at first at intervals of a month or six weeks, and finally as often as every week, and the periodicity was very marked. There was gradual loss of flesh and strength, a certain amount of pain along the course of the nerves, and the patient finally died of exhaustion.

During life the area of hepatic dulness over the right lobe was increased downward, but it was somewhat difficult to say whether or not the liver was enlarged, especially as the patient was a woman. In the ileo-cæcal region there was a certain amount of induration, nodular in character, and ileo-cæcal obstruction was diagnosticated, but beyond that it could only be said that it was probably cancerous in character. As to whether the origin was primarily cancerous or typhilitic degenerating into cancer, was difficult to say.

At the autopsy there was found entire absence of any projection of the large intestine below the entrance of the ileum. The ileum entered the large intestine at a place where it was about an inch in diameter, with very thickened walls, in the condition of carcinoma. The surface at that point was ulcerated, but there was no mucous membrane. It could be seen that there had been retraction by ulceration and loss of cæcal protrusion. Moreover, there was no appearance of true ileo-cæcal valve. There was a thrombus in the external iliac vein.

Strung along the omentum throughout its length were nodules of new growth, varying in size from an inch and a half to half an inch in diameter, firm and irregularly rounded, and they were separated from the lower border of the large intestine. They could have been very easily mistaken, during life, for scybalæ in the large intestine, both from feel and position.

The liver presented a projecting right lobe, which was described as it appeared during life, projecting a little more than two inches below the free border of the ribs. There was no new growth in this portion except above and behind where it joined the main portion of the right lobe, and there it was the seat of carcinomatous infiltration. The remaining portion of the liver was the site of numerous nodules of new growth, varying in size from a pea to two inches in diameter. The largest nodules were umbilicated and free upon the surface. In the lower lobe of the right lung was a spot of new growth, surrounded by a certain amount of inflammatory change. The remaining portion of the lungs were somewhat œdematous.

The uterus showed a growth somewhat irregu-

larly rounded, *two* inches in diameter, and occupying the position of the posterior lip, and implicating the posterior wall of the vagina. This was only slightly eroded on its vaginal surface. It was probably of rapid growth, as the patient was examined three months before death, by a competent gynecologist, who said there was no evidence of uterine disease.

The point of interest in the specimens was the appearance of secondary cancer in places where primary cancer usually occurs. By some it has been regarded as absolutely the rule, by others nearly so, that secondary cancer does not occur in such places as are usually the site of primary carcinoma. But this was the second exception which Dr. Janeway had seen of recent date. The other case was one of carcinoma of the left breast, secondary to primary cancer of the left lung. The diagnosis was made eight months before death, and examination of the breast from time to time, finally resulted in the discovery of a small nodule, *two* months before death, and the autopsy revealed carcinoma of the left lung and breast, and also of the right lung and liver.

In this case, as in some others he had seen, the appearance of the carcinoma of the lung was such as might readily lead one who does not make a microscopical examination, to regard the disease as chronic pneumonic infiltration.

Again, with reference to the diagnosis between the downward projection of the right lobe of the liver and a movable kidney, the liver moves upward and downward in respiration, while the kidney does not. The kidney can be pushed from behind forward on an axis formed by its vessels, and can be pushed back into the lumbar region with a kind of jump which can be appreciated by the hand.

In answer to a question from the president, Dr. Janeway also directed attention to resonance upon percussion intervening between the lower border of the liver and the upper border of the kidney.

On microscopical examination the new growth in the omentum, neck of the uterus, liver, and the lung, as well as the tumor at the primary seat of the disease, the cæcum, all had the structure of epithelioma of the cylindrical type.

The Society then went into executive session.

CAROBA.—In Brazil an infusion of the leaves of the caroba (*jacaranda procera*, Sprengel) as well as Dr. Colmeiro's electuary are much used in the treatment of cutaneous and syphilitic affections. The infusion is made of 1 part of the leaves to 9 parts of water. Dose, ʒ i. t. i.d. The formula for the electuary is as follows:

Powdered caroba leaves	45 parts.
Powdered sarsaparilla root	15 "
Senna leaves	15 "
Calomel	1 part.
Syrup	q. s.

Dose, ʒ i. bis ind.

Caroba contains an alkaloid (carobine) crystallizing in silky needles, insoluble in ether, and rapidly soluble in water and boiling alcohol; two acids, one (carobic) crystallizable in stellate forms and soluble in water and alcohol, and another (stero-carobic) of pale brown color; a resin (carobone), amorphous, balsamic, and acid; a balsam of syrupy consistency and agreeable aromatic odor, and other less important principles.—*El Sentido Cat.*

Correspondence.

EXCISION OF THE INTESTINAL CANAL WHERE COVERED WITH PERITONEUM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—In the number of THE RECORD for June 17th, in the report of the transactions of the Surgical Section of the American Medical Association, I am credited with conclusions upon excision of portions of the alimentary canal that were quoted from Koeberlé. I fully endorse his conclusions, and had put them in practice years before he published them, and published an illustrative case in the *Philadelphia Medical and Surgical Reporter*, of October 25, 1879. The conclusions I drew from my own and other cases are as follows:

First.—Any portion of the alimentary canal may be safely excised, and stricture, cancer, perforating ulcer, and gangrene demand that it shall be done.

Second.—The method heretofore adopted of suturing the divided ends of the bowel is dangerous, because tympanites, by pressing upon the heart and lungs, interferes with the vital processes in a patient already worn down by disease and shock, and by distention causes traction upon the sutures in such degree as, in many instances, to cause their giving way, which is followed by fecal extravasation, peritonitis, and death.

Third.—These dangers are to a great extent obviated by making an artificial anus, and permitting the escape of the gases as they form.

Fourth.—Artificial anus is easily cured by a plastic operation devised by myself, and described in the paper.

Fifth.—If that portion of the bowel which constitutes the eperon be cut away at the time of the first operation, no suture operation will be found necessary, as the artificial anus will close spontaneously by cicatricial contraction.

Sixth.—The successful cases reported in the paper prove the propositions to be true.

To the conditions requiring excision I should have added "some gunshot wounds."

In the discussion that followed, Dr. Ransohoff suggested that the cutting away of the eperon at the first operation might be unadvisable on account of it consisting of the mesenteric portion through which the bowel receives its nutrition. His objection is good, and valid to some extent. The vascular supply is so great, and the anastomoses of the blood-vessels in the intestines so extensive, that it is very probable that sufficient nutrition would be carried to exposed parts, and it is further well known that vessels are rapidly thrown out from adjacent parts that supply nutrition, as happens to the distal portion of the pedicle where it is tied and dropped in ovariotomy operations. Still, such an objection may be shunned by a quarter-turn of the intestine, and excision of a portion that would be eperon to one side of the mesenteric attachment.

In the paper I collected all the cases of excision of the intestine, for whatever cause, that I could find a report of, and in several I found that the patients that had been operated upon died from the giving way of the stitches within the abdomen. This could have been obviated by making an artificial anus. There is still another danger that will not be en-

countered by following the same practice, and that is the cracking open of the peritoneal coat of the bowel from overdistention. From these crevices exude inflammatory products that, decomposing within the abdomen, produce the septicæmia and death as described and insisted upon by Drs. Dugas, Sims, Hunter, McGuire, Peaslee, W. T. Briggs, and others. The overdistention causing, in many cases that are already worn down, paralysis and consequent intestinal obstruction, a condition that undoubtedly kills many patients who have typhoid fever. I have seen, in one case of typhoid fever that I was called to several years since, with Dr. Francis Drude, of this city, where there was enormous tympanites the most markedly favorable result from aspiration removing the excessive gases. These gases are prone to accumulate after all serious abdominal operations and the accumulation is one of the almost constant complications of ovariotomy.

The closing of the intestine and dropping it back into the abdomen, and stitching up of the abdominal wound, prevents ready drainage and removal of the septic products of inflammation. When an inflammatory process elsewhere than in the abdomen produces pus or other septic material, the first thing the surgeon does is to make large openings and give it free exit, and, if he considers it necessary, he goes farther and washes it out with some antiseptic solution. This treatment of late has been adopted even in the treatment of joint diseases, a class of cases that were approached a few years ago with as much fear as the abdomen was; no one will deny that the present practice is not superior to that of the past, then, things equal to the same thing being equal to each other, why not apply it to all conditions where there is retained septic material, not waiting until there has been poison enough absorbed to overpower the patient, for such waiting would be disastrous alike to the good fame of the surgeon and the profession. Neither would I have it supposed that I favor indiscriminate abdominal and intestinal section, but I would have it made in those cases that have heretofore proved so fatal.

This doctrine is not new with me, as will be seen by referring to a paper read by myself at the meeting of the American Medical Association in Richmond last year. Some of the gentlemen in discussing the paper seemed to forget that it referred to any class of excisions except in cases of gangrene from strangulated hernia, or, what is more probable, did not hear the paper read, and discussed it from the hearsay standpoint. These gentlemen, who are able and conscientious surgeons, that are teaching and teaching well the science and art to those that are to come after us, opposed any interference in cases of gangrene in strangulated hernia further than simple incision, holding well to the doctrine taught in the text books, "not to meddle with the adhesions." Now, this doctrine, I think, will admit of considerable modification.

There are cases where, as in femoral hernia, the opening under Poupart's ligament leaves a very narrow contracted opening, that is likely to become much narrower, and if spontaneous cure of the artificial anus ensues, there is a liability to partial or complete intestinal stricture that may at any time become blocked by solid or semisolid egesta. The same objection will apply to gangrenous hernia occurring anywhere else, where half, or more, not including the whole, diameter of the intestine becomes gangrenous. The very fact of spontaneous cures of artificial anus occurring renders the risk greater than if the opening has been cured by the surgeon cutting down the eperon with an eterotome or other means, ensuring a sufficient passage-way for the contents of the bowel.

The fear of being unable to close the artificial anus I believe has deterred surgeons from making it as often as they would otherwise have done, the operation I have introduced and described, both in the paper read at St. Paul and in the *Philadelphia Medical and Surgical Reporter*, of October 25, 1879, I hope will be as efficacious in other hands as it has been in mine, though I hope the cutting down of the eperon at the first operation may take the place of any plastic secondary operation.

My own experience has been limited, having performed enterotomy and making artificial anus but six times, of that number none died under two months, none died from the operations or its consequences; three are yet living, and of the three one had eight inches of intestine and a large piece of omentum excised October 9, 1878, and one had three inches of intestine excised January 21, 1882, both are in excellent health and bid fair to be for many a day. I hope that other and abler men, men who have better opportunities to investigate, and whose reputations bring them more patients, will investigate this subject thoroughly and impartially, that the truth may be arrived at. That one man, very able to render great service has commenced the work, I am informed through the columns of the London *Lancet*, and *British Medical Journal*. That man is Mr. Thomas Bryant, of Guy's Hospital. He reports a successful case of excision of a stricture in the descending colon, leaving an artificial anus. In conversation with him, last August, I entered minutely into the subject and sent him the papers I had written. Hoping that my own countrymen may assist in the rapid and correct solution of these problems,

I remain, very truly yours,

WILLIAM A. BYRD.

407 JERSEY STREET, QUINCY, ILLINOIS, July 17, 1882.

WHAT IS A CONSULTATION?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—The question has arisen in the mind of the writer, who is as yet but little experienced as to the practical working of codes of medical ethics, as to what constitutes a "consultation." Is it a consultation for a specialist to treat a patient sent to him by a physician of another school? An oculist, for instance, prescribing treatment, can hardly be said to consult with the general practitioner who has given the case over to his direction. His authority becomes supreme, and whatever he may recommend is followed implicitly and naturally because of the existence of confidence in his great skill on the part of those who have employed him. He does not compromise himself in any way as regards professional integrity, he yields no point as to the treatment to be pursued. On the other hand the general practitioner, who has given the case up to his direction, no longer has any responsibility as regards the treatment, that having been decided upon by the specialist. The only question that remains is as to whether it is justifiable to treat a patient knowing that he will employ a physician of another school to act in a subordinate capacity—really as a nurse—whose business is simply to see that the treatment prescribed is properly carried out? With

this view of the case, is it a matter worth contending about?

Again, suppose a family employing a homœopathic physician wishes to obtain the opinion of a physician of the regular school, is it a "consultation" for such a physician to respond and to express himself as freely as he pleases in regard to the case in question and the treatment to be followed? Is it not rather a grand opportunity for him to vindicate the honor of the profession by demonstrating practically that he is possessed of superior judgment and skill. If the parties who have called him are convinced that he has a better understanding of the case and yield to his judgment, it is an evident victory; and in any case there is no longer room for the lurking suspicion or the open taunt, that the doctor is afraid to meet the homœopath. He has not yielded one iota of his principles or convictions. If he finds the homœopath giving such medicines as are prescribed by the regular school, he has fine opportunity to call attention to the fact, and thus destroy at a blow the false pretensions that have existed; or, if he finds quackery rampant, he can refuse to have anything further to do with the case unless the treatment he may recommend is adopted. In any case, it does not appear that he has had a consultation or sought to have had an agreement with a heterodox practitioner. On the contrary, he has done his duty to suffering humanity, and taken the surest means to uproot quackery. It seems to the writer that if physicians have the privilege of doing the things indicated, it is all that can be asked or expected, and that any talk about freedom of consultation beyond what has been indicated is rather nonsensical from any point of view. In fact, the discussion that has arisen about the modification of the code appears to be having the undesirable effect of giving quackery the benefit of a vast amount of free advertising, whilst it appears that the point at issue is exceedingly small, provided that practitioners are allowed to do what has been indicated in this article.

M. A. VEEDER, M.D.

LYONS, N. Y., July, 1882.

SUPPOSED DEATH BY CHLOROFORM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—It is desirable that there should be recorded every death attributable to the anæsthetic agents in use, for it has hardly been settled that one of these agents should be universally employed because of its immunity from danger. In certain sections of our country, and of Europe, chloroform is still the favorite article used, for its general adaptability, and because, in the largest experience, it has proved safe and satisfactory. In other sections there is a strong prejudice against chloroform, and a belief that ether is entirely free from danger. I have, in an experience of more than thirty years, never had occasion to distrust chloroform, and have never until now seen a death attributable to its administration. From very many experiments and observations, I have, however, been led to the belief that ether is less apt to be followed by nausea or by great depression of vital power. My rule of practice, then, in late years, has been to employ chloroform as a rule in surgical and obstetrical practice, except in operations necessarily protracted, or where nausea or vomiting would be prejudicial to the condition of the patient. I am inclined to doubt whether the death in the case which follows can be attributed solely to chloroform. Fright, terrible anxiety, a peculiar nervous organization, and an exalted moral sensibility, may have had much to do with the sad termination. But I prefer reporting the case and leaving it to the verdict of the profession. Further interest attaches to it from the fact that a vile secular press has circulated through the country the grossest misstatements regarding the case itself and the conduct of the physicians connected with it. I will notice and correct only two of these. It has been falsely stated that my assistants were introduced into the operating chamber of the patient against her wishes and while she was insensible from chloroform. The truth is, that the consent of the lady was freely given, because she knew that assistants were necessary. Her only desire was that she should be chloroformed before the assistants were introduced. Next, it has been affirmed that the cause of death was suppressed to shield the physicians and to prevent a coroner's inquest. The truth is that the death (although the matter was rather doubtful) was at once assigned to the chloroform, and this fact frankly announced to the family of the deceased and to others. Moreover a mortuary certificate of death from "*Chloroform Narcosis*" was handed to the City Registrar in order to obtain a permit for burial.

CASE.—On May 7, 1882, I was called to attend Mrs. L. R——, who had long been an invalid, and who had been attended before by two very worthy practitioners of this city. She was forty years of age, married, and the mother of two children, the last being six years old. I found her thin, anæmic, and unable to exercise without much backache, never sleeping well at night, having usually prolonged and profuse menstruation, in the intervals much leucorrhœal discharge, bearing-down sensations, with vesical and rectal tenesmus, difficult digestion, and constipation. These symptoms had in part pertained to her since the birth of her first child, but had been more continuous and severe for several months past. There was now also severe paroxysmal cough, with the physical signs of subacute bronchitis on both sides of the chest. The pulmonary symptoms Mrs. R. attributed to a recent cold, and said she had sent for me chiefly to relieve her of the trouble which she had had during many years, and which made life a burden to her. She said she knew her disease to be uterine. Other physicians had treated her for this, but she was in hopes that a radical operation might entirely relieve her. There was prevailing an epidemic of whooping-cough, and the children in the house had suffered. Mrs. R. had formerly had this disease, but the character of her pulmonary symptoms led me to believe that she was to some extent suffering from the "epidemic constitution of the atmosphere." She was anxious for a thorough examination, so, after prescribing for the cough, I appointed an early day for the purpose. In due time I discovered a left lateral fissure of the cervix, reaching to the cervico-vaginal junction. Also an elongated and enlarged cervix. A prolapse of the bladder, and prolapse and partial retroversion of the uterus. I gave as my opinion that much could be done by treatment, both local and general, but that first of all the cough must be relieved, and the digestive organs improved. In time I proposed to apply local remedies to the uterine and cervical cavities, and to close the fissure by operation. Mrs. R. was intent upon an early operation, as she said she had too long been trying palliative remedies. I could with difficulty persuade her that these

medical means must for a time be postponed. After about a month's general treatment, part of which time I was absent from the city, Mrs. R. had so improved that she again renewed the question of operation, saying that the cough did not now affect her, and that she wanted to be attended to before leaving the city for a summer's vacation. While regarding her as rather a bad subject for operation, I nevertheless thought the cervical fissure could be closed without risk, and that by the use of a pessary she could be enabled to go comfortably into the country.

June 19th was appointed for the operation. Mrs. R—— had always been sensitive as to the matter of personal exposure, so I readily assented to give the chloroform only in the presence of female attendants. When the request was made for patient to get upon the table, she became very much excited, and could scarcely be comforted and assured. She shrank back as one having a feeling of impending danger. I subsequently learned that she had had a presentiment of danger, and went so far the night before as to write out requests she wished fulfilled after death. I mention these facts to illustrate the nervous condition of the patient, as with many it may be considered as having something to do with her sad end. The chloroform was given upon a towel folded funnel fashion. The towel was first held a little distance from the face until the patient grew accustomed to the vapor, and habituated to the proper inhalation. The usual period of excitement came on, with some struggling of the arms and rolling of the body. One of the female attendants helped to control these movements, and in a short time relaxation began to be evident, with the slightest stertor of breathing. Less than three drachms of chloroform had been used. I at once suspended the chloroform, passed the towel over to the nurse, who was at the bedside and a little removed, and told her to hold it where she was. I felt no apprehension about the patient, and moved to the door separating the chamber from the parlor, and called to Drs. Simons and Pelzer, my assistants, to enter. I now took my position at the foot of the table, while my assistants remained at the side, and began to put the patient into the semi-prone and lateral position for operation. I little thought that during the few seconds of my absence the cumulative effects of the drug would be exhibited. Glancing at the face of the patient I suddenly discovered that it was cyanozed, and the eyes staring and fixed. I called to Dr. Simons to notice if the breathing was right, and almost simultaneously we both advanced to patient's head. I saw that the respiration was embarrassed, and heard a gurgling noise coming from the presence of mucus secretion in the bronchi. Dr. Simons raised the head of patient and turned her body partly over into the supine position. I threw up the windows, dashed cold water upon the face and chest, slapped the surface smartly, depressed head while body and lower extremities were raised; injected brandy, and, subsequently, liquor ammonia and brandy subcutaneously, wrung towels out of very hot water and applied them over cardiac region; galvanic battery was used as soon as this could be secured, and finally, noticing that the respiratory movements were now entirely arrested, and also the heart's action, while the veins in the neck were greatly distended, I opened, first a vein at the bend of the arm, and subsequently the external jugular on the right side of the neck. I hoped that by removing some of the dark blood from the cavities of the heart, this organ would have a better chance for contracting. All to no purpose. The heart remained paralyzed, and we had soon to realize the fearful fact that death had occurred.

Respectfully,

R. A. KINLOCH, M.D.

CHARLESTON, July 18, 1882.

RELATIONS OF COUNTY TO STATE SOCIETIES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: If a county medical society repudiates the action of the State Society in the matter of the new code, in what way will such action affect the relations of the County Society to the State Society?

Yours respectfully, INQUIRER.

[The County Societies have a perfect right to express their opinion on the question of the code in any way that they see fit without affecting their relations to the State Society; they must, however, formally adopt the new code as one of their by-laws if they desire to retain their legal status and corporate rights as a County Society, and their right to be represented in the State Society. The medical act of April 7, 1866, gives the State Society supervision over the by-laws of the County Societies; in fact they do not become legal by-laws until they receive the sanction of the State Society, and, of course, a society without by-laws that can be enforced is a sham. For instance, if a County Society declined to accept the new code and adhered to the American code, and if in that county, charges were brought against a member for violating their code, the member if expelled would, if he appealed to the courts, be immediately reinstated as a member. The only way in which a body of physicians now constituting a County Society, can release themselves from obedience to the authority of the State Society is by giving up their chartered rights, and their present legal title and forming a voluntary non-incorporated association. In that case they could enact such rules, ethical or otherwise, as pleased them. If this course should be pursued, some other body of physicians of a different mind could meet together, as provided by the act of 1806, organize as a County Society, assume the title of the old society, adopt by-laws in harmony with those of the State Society, and be entitled to representation in it. They would in fact become the regular County Society.—ED.]

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 23, 1882, to July 29, 1882.

ELBREY, F. W., Capt. and Asst. Surgeon. Granted leave of absence for six months on surgeon's certificate of disability. S. O. 168, A. G. O., July 21, 1882.

RAYMOND, H. I., 1st Lieut. and Asst. Surgeon, to proceed at once, with necessary attendants from Whipple Bks. via Ft. Verde, to the scene of recent engagements with hostile Indians near General's Spring, and bring in those wounded to Fort Verde, and remain in charge of post hospital there until further orders. S. O. 112, Dept. of Arizona, July 19, 1882.

CARVALHO, CARLOS, Capt. and Asst. Surgeon. Died near Boston, Mass., July 23, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 29, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
July 22, 1882.	1	11	31	6	30	34	1	0
July 29, 1882.	1	7	38	2	19	28	1	0

A New Medical School in Australia has just been established. The school is a part of the Sydney University and is well endowed by Government.

Oxydized Water will, according to Mr. Paul Bert, arrest fermentation from organized ferments, but has no effect upon unorganized ferments.

Comparative Size of Drops.—The following table approximately gives the average number of drops in a *fluid drachm* of the various classes of U. S. P. preparations:

Sulphuric ether	174	Mixtures	89
Fluid extracts	141	Vinegars	77
Spirits	141	Syrup not containing fl. ext's.	69
Tinctures	136	Solutions (1 exception)	66
Volatile oils	131	Diluted acids	61
Oleo-resins	124	EXCEPTIONS:	
Acids (3 exceptions)	123	Sol. nitrate of mercury	131
Wines	106	Nitromuriatic acid	76
Fixed oils	103	Muriatic acid	70
Syrups containing fl'd xt.	97	Sulphurous acid	59

M. Pasteur is a native of the Jura, President Grévy's department, and is short, angular, powerfully built, and shows in his countenance his humble origin. One sees that he has issued from a hard-working race, and has himself led a laborious life. People who have leisure are wordy and take time to give neat and graceful turns to their phraseology. This is seen in M. Renan. M. Pasteur goes straight to the point. He speaks in a clear voice, is a close reasoner, emphasizes to make his hearers well retain what he says, and not to charm their ears, and uses abrupt, quick gestures, which, if not elegant, are telling. Pasteur is a steadfast believer in Spiritualism. He was not ashamed to say that in his estimation there was nothing positive in the Positivist doctrines of Comte. The central fact of the universe, namely, Infinity, was, he continued, overlooked by the Positivists, whose forecasts, political and social, time had shown to be wrong. They were only in the truth when they accepted the conclusion of Littré, to the effect that, without a spiritual link, the human family would fall to pieces and nations become as mere hordes. But they fell into the error of placing this bond in a sort of religion, proceeding from humanity, and inferior to it.

Dissection Material.—About six hundred bodies are dissected annually in Berlin.

The Deaths from Intemperance in Great Britain and Ireland number annually about forty thousand, according to Dr. Norman Kerr.

An Institution for the Application of Euthanasia.—A singular legacy was recently left to the French Government by M. Giffard, the well-known Parisian inventor of balloons. He desires that his money shall be devoted to the establishment of national institutions, in which persons suffering from painful and incurable diseases may be allowed, by the use of chloroform and other anæsthetics, to put an end to themselves, under the direction of medical experts, and with the consent of their friends. M. Giffard, it is said, secured an euthanasia for himself by means of a special apparatus he invented for the inhalation of chloroform. M. Renaud is reported to be in favor of painless suicides in such cases, his only stipulation being that no man shall by law be entitled to take his own life until he has obtained the consent of his friends in a *conseil de famille*.

War on Pasteur.—A correspondent of the *Cincinnati Lancet and Clinic* has visited the laboratory of the Brown Institute near London, and describes the experiments which Klein is making with anthrax vacilli. He finds that these vacilli multiply by spores at 40° C., but do not do so at 43° C. This agrees with Pasteur's experiments. Klein finds, however, that the cultivation of the vacilli can be done without spores (by fission) at 25° C. The cultivated vacilli, however, had no protective influence upon rats, guinea-pigs, mice, etc., as averred by Pasteur. It seems probable that further experiments will fail to confirm some of Pasteur's conclusions, and we are informed that there is likely to be war to the knife.

Yale Thermometric Bureau.—The report of Mr. Waldo for 1881–82 states that 3,811 physicians' thermometers have been examined in the year 1881–82, which is more than double the number of the previous year. Four were broken at the observatory in handling and twenty in transit, the latter being in all cases carelessly packed. The amount of error found in the readings averaged about 1° F.

The Second Year Course of Anatomy has been abolished by the College of Surgeons of England. Students are now obliged to attend anatomical lectures for one year only.

Medical Æsthetics.—At the banquet given at the annual meeting of the State Medical Society of Arkansas, there were ingenious accompaniments to the feast. At each plate was a little white roll, in appearance suggesting a surgeon's bandage and labeled "Epicurean bandage." Upon unrolling this it was found to consist of a yard of fine gros grain silk ribbon, upon the middle third of which was printed, in red letters, the bill of fare, in the form of a prescription, in Latin phraseology, the perusal of which afforded much amusement. At each plate also lay a model of a surgeon's saw in stiff card, upon which were printed the toasts, with the names of those who were to respond to them.

Baronetcies and the Medical Profession.—English doctors are vexed just now that nine baronetcies have recently been conferred and none given to doctors. The *Medical Press and Circular* gives the comforting intelligence that one was conferred upon a Mr. Lawes—an estimable gentleman who deals in manure.

Acne Filaris and Acne of the Face.—M. Lallier, of the Skin Hospital (St. Louis), thus treats acne filaris, which develops itself on the forehead, near the hair, slightly resembling eczema:—1st. The following lotion to be applied every night: Sulphur (flowers), ʒ vj.; alcohol, ʒ iss.; water, ʒ j.

2d. Alkaline baths. 3d. Take at each meal half a teaspoonful of bicarbonate of soda in a little sugared water. As to acne of the face, he applies every night, with a hair pencil, the following preparation: Water, ℥ iv.; camphorated spirits, ℥ j.; washed sulphur, ℥ ss.; glycerine, ℥ iiss.; which is carefully washed off in the morning. When sulphur does not succeed in the treatment of acne, recourse may be had to black soap, which can be employed for four consecutive days, after which abstention is enjoined, when the treatment can be recommenced; and so on until the patient is cured. But as the general health generally requires looking after, M. Lallier orders tartrate of iron, ℥ ss.; aloes, eight grains, for 100 pills; two to be taken at each repast.

Phenic Acid in Whooping-cough.—Dr. Aymerich recommends, in the treatment of whooping-cough, the employment of phenic acid with bromide of potassium: bromide of potassium, ℥ j.; phenic acid, three to four grains; syrup of lemons, q. s.; vehicle, ℥ vj. A large or a small spoonful, according to the age of the patient, every two hours. He has never seen any accident to follow from the antiseptic agent.—*Medical Press and Circular.*

German Ovariotomy.—Professor Schroeder (Berlin) has performed two hundred and fifty ovariotomies. The first hundred gave a mortality of seventeen, second of eight, and only three died of the last fifty operations, of these only one of septic infection. Schroeder sees no reason why he should abandon his style of operation. He retains the spray, as he asserts that the peritoneum absorbs the germs of infection, and it was impossible to clean all its parts in such an extent by any other method. Besides this, he is no great friend of a large assortment of instruments and of too many assistants. He does not believe that he could decrease the mortality to a much lower degree than he had obtained, averaging five to fifteen percentage. Martin's percentage of death is eighteen, and he only differentiates from the former operator by operating between the legs of the patient whilst sitting.—*Berlin Klin. Wochensch.*

Strangulated Hernia Treated by Belladonna.—Mr. Smith Batten (*British Medical Journal*, July 15, 1882) reports two cases of strangulated hernia treated successfully with tincture of belladonna (B. P.). In one the drug was administered in half-drachm doses every half hour, until the specific effects were manifest, and in the other, "scruple" doses every hour. We have seen full doses of opium produce the same effect.

A Russian Medical Congress will be held at Moscow after the opening of the exhibition at that city.

Excision of the Kidney.—Mr. C. Heath, of London, excised the kidney, July 12th. The patient was a young child, and the disease sarcoma. Death occurred eighteen hours after the operation.

Œsophagostamy is a new term to designate the formation of a œsophageal fistula in cases of stricture of the œsophagus. The operation proposed by Mr. Reeves has recently been performed by him upon a male patient, aged sixty, with malignant disease of the œsophagus. At last accounts the patient was doing well.

Dr. Andrew Buchanan, Professor of Physiology, University of Glasgow, died July 9th, at the ripe age of eighty-four years.

Gastrostomy was recently performed by Mr. Langton, St. Bartholomew's Hospital. Patient, a young child; disease, stricture of œsophagus from swallowing lye-water. Result, death one week after operation.

Death Under Ether.—Mr. Lawson Tait, of Birmingham (*British Medical Journal*, July 15th), reports a death from ether. The patient was an anæmic woman, aged forty-five, who had an abdominal tumor. Death occurred during the administration of the anæsthetic, and is believed to have been occasioned by the use of an inhaler by which the patient breathed over and over again the same volume of ether and air.

British Medical Association.—The fifteenth annual meeting of the British Medical Association will be held at Worcester, England, August 8th, 9th, 10th, and 11th. A semi-centennial jubilee is to be held.

Chronic Cases in Bellevue Hospital.—The surgeons of Bellevue Hospital are complaining through the columns of the secular press that the other hospital surgeons of the city send all their chronic and incurable cases to them, thus increasing the mortality of said institution, and crowding the wards with uninteresting cases. The other hospitals repudiate the charge and say that Bellevue is an almshouse hospital, and must necessarily take everything sent to it.

Dr. Samuel Kohn.—By an oversight the title of M.D. was omitted from the name of the author of the interesting article on page 91.

The Late Dr. John W. Corson.—At a special meeting of the Essex District Medical Society, held in Orange, on Tuesday, June 6th, the following resolutions were adopted:

Resolved, That in the death of Dr. John W. Corson, of Orange, this society notes the loss of an esteemed and respected member. He was learned in the science of his profession, and with unusual zeal devoted to it the best powers of his life. As a professional associate, courteous, considerate and without guile himself, it was to his sensitive nature a source of grief and unhappiness to discover the opposite in others. He leaves behind him the memories of a long Christian life, beautified by a steadfast aim to keep, in all things, a conscience void of offence toward God and man.

Resolved, That we tender to his afflicted widow the sympathy of his medical associates in her bereavement.

Resolved, That these resolutions be published in the daily papers.

Wm. J. Chandler, Secretary *pro tem.*

Death of Dr. M. A. Wilson.—Dr. Milo A. Wilson, formerly of this city, died in Denver, Col., of Bright's disease, on the morning of July 6, 1882. He was born in Pittsburg, in 1845, and was the son of the late Dr. R. A. Wilson, and brother of the late Oregon Wilson, the artist. He was at one time one of the surgeons of the Seventh Regiment, and a member of the medical staff of Bellevue Hospital. While in the latter position he became particularly interested in the improvement of the condition of the insane, and made a number of interesting experiments to ascertain the effect of music upon the patients at Blackwell's and Randall's Islands. Dr. Wilson was the author of several medical books.

Original Communications.

TEN YEARS' EXPERIENCE IN THE TREATMENT OF STRICTURE OF THE URETHRA BY ELECTROLYSIS.

By ROBERT NEWMAN, M.D.,

PERMANENT MEMBER OF NEW YORK STATE MEDICAL SOCIETY, SURGEON NORTHWESTERN DISPENSARY, ETC.

PART I.

My paper on the successful treatment of stricture of the urethra by electrolysis in 1874,[1] was an innovation. But contemporaries and followers have confirmed my statements. The success of the treatment has been so unique, that for the last ten years I have treated all strictures under my care by electrolysis. I have waited on purpose for eight years, in order to give a report which allows no doubt. Most of the cases reported in the former paper were treated in 1872, and have remained under observation up to the present time. The object of this article is: (1) To continue the history of the old cases, a record for ten years, which will show that scarcely a relapse has taken place, and all patients so followed up remain well to-day; (2) to relate a few new cases, and give a general outline of cases during these ten years; (3) history of the operation, with methods and cases reported by other practitioners; (4) answers to objections and queries, with new facts and improvements.

I.—I will give the sequels of all the cases reported in my paper of 1874, and continue their history up to date, which is a period of ten years—1872 to 1882.

For history, treatment, etc., of these cases, from 1871 to 1874, I refer to the first paper, not wishing to relate them a second time.

CASE 2,131.—*Traumatic impassable stricture of nine years' standing, treated successfully by the third method of electrolysis.*—Came under observation in 1872. In due time reports well, and passes a sound No. 12 large American scale.

Sequel.—The patient has remained well six years, up to 1878. Then he changed his business and mode of living. Having gone West, he travelled constantly in the country, riding either on horseback or in a buggy, over bad country roads in severe weather, and thereby contracted a new stricture.

STRICTURE URETHRÆ, PERINEAL ABSCESS—PARALYSIS OF BLADDER.

He wrote me a long letter from Ohio, that he acquired this new stricture in the way just mentioned, and for this reason we must call it a new traumatic stricture—certainly not a relapse. The calibre has gradually become so small that his physicians could not pass any instrument, not even a filiform bougie. A perineal abscess complicates matters, as also paralysis of bladder. He has no control over his bladder, neither can he pass water, nor retain it.; the urine dribbles away drop by drop, through an opening in the perineal abscess; wets his clothes and limbs. He wears a rubber urinal, which has to be emptied at intervals by day and night. Sleep is disturbed. Urine is loaded with triple-phosphates, mucus, pus, blood-corpuscles, and albumen. His general health is undermined, he is nervous, careworn, and emaciated.

July 6th.—Having come to New York he called at my office, accompanied by his family physician, an excellent practitioner of first-class standing. On examination the urethra was found inflamed and extremely sensitive. The meatus admits a good-sized sound, six inches and a half down the urethra. From that point the stricture begins, and no instrument will pass it, no matter how small. Ordered rectal suppositories of opium, camphor, and belladonna, and external hot applications.

July 8th.—After patient manipulations a filiform bougie passed the stricture and entered the bladder. Next an electrode bougie, No. 11, French, was introduced and firmly arrested by the stricture; the free end was connected with the negative pole of the galvanic battery. The positive sponge electrode applied over abdomen closed the circuit. The electrolysis was kept up with six cells steadily for seven minutes, when the bougie entered the stricture, pushed slowly forward and entered the bladder. Ordered ten grains sulphate of quinia.

July 9th.—Is so much better that he passes water voluntarily.

July 10th.—Feels good, no trouble, voids urine with full control of bladder, has no straining, passes water easier with a tolerable stream.

July 12th.—Steady improvement.

July 13th.—Quality of urine is improved, less sediment and pus, second electrolysis as before with a bougie, No. 14, French, which passed easily into the bladder. Present Drs. Green and Hund.

July 14th.—Feels better. No untoward symptom, not a drop of blood passed from stricture during or after the operation, has no pain and passes a very fair stream without any difficulty.

July 17th.—Third *séance* of electrolysis, in which bougie No. 20, French, entered easy in five minutes with seven cells current. After this the patient felt so well that he concluded to return home.

It will be seen that in this unpromising and severe case, first, electrolysis entered the stricture, while the pressure of simple dilatation would not do it; second, that only weak currents were used, which I always prefer and recommend, and third, that the intervals between the *séances* were only four and five days. While longer intervals between each *séance* of electrolysis are preferable, this and many other cases show that it is possible to hurry the treatment if circumstances necessitate such a procedure.

Mr. S—— left for home, and for a long time I have not heard from him. As the case was not cured when he left, and the stricture only widened to No. 20, French, reasonably the best result could not be expected. Nevertheless the following letter just received from his family physician tells the sequel until the present time:

TROY, O., May 18, 1882.

ROBERT NEWMAN, M.D., N. Y.:

It was with great pleasure . . . and I hasten to assure you that your patient, Mr. S——, has been in the enjoyment of very good health since our visit to you, and your successful passage of the strictures . . . The stricture has not since closed, and he has been enabled to follow his avocation as clerk. Very truly yours,

J. H. GREEN, M.D.

CASE 2,045.—*Two strictures—Complication of syphilis.*—Came under treatment in March, 1871. Stric-

[1] Transactions of the Medical Society of the State of New York, 1874. Archives of Electrology and Neurology, vol. I., No. 1, page 18.

tures were cured in a few *séances* of electrolysis. This was my first case treated successfully by this method, after I myself had failed with dilatations.

CASE 2,032.—*Two strictures—Chancroid—Failure of dilatation—Success with electrolysis.* — Patient was treated and cured by electrolysis in March, 1872. *Sequel*—Have heard from him off and on; now keeps a hotel in the country; has not had a relapse. A friend of his told me that he remains well (May, 1882).

CASE 2,098.—*Stricture—Spermatorrhœa—Impotence—Melancholia.*—Was under treatment March, 1872. *Sequel*—Has been kept under observation for ten years, without any further treatment after first report, and remains well. After being cured of his ailments he married, and during these ten years became father of eight children, six of them still alive and healthy. Has not received any after-treatment, nor used bougies. Two years ago I passed once a sound, No. 22, French, easily, only to see that the former stricture had not contracted. I meet the gentleman once in a while, and have seen him quite recently, when he appeared to be in perfect health. He resides in Philadelphia.

CASE 2,129. — *Gonorrhœa and stricture.* — Was treated in July, 1872, and stricture cured in three *séances*. Complications were troublesome. *Sequel*—Ten years' observation without any relapse. The gentleman is still in New York, partner in a large dry goods house.

CASE 2,155.—*Stricture and gleet.*—November, 1872. A stricture one inch from meatus was cured in two sittings. *Sequel*—Not heard from; but as it was not an aggravated case, there is less interest in it.

CASE 2,162.—*Gonorrhœal stricture.*—Was dismissed as cured January, 1873. *Sequel*—Was kept under observation for some years. Is now in business in Chicago, but comes to New York often. Have seen him only a few months ago, and expect him here again in July, 1882. Is in perfect health, without having had any relapse or treatment.

CASE 2,164. — *Simple stricture.*—Was treated in 1872. *Sequel*—Patient lives in an inland village in Connecticut. Heard last from him, in 1878, that he has remained well, without any relapse.

CASE 2,165.—*Three strictures.*—Success in one application, 1872. *Sequel*—Not heard from.

CASE 2,179.—*Stricture of three years' standing.*—A tedious case in 1873. When patient went home sound No. 23, French, passed easily. *Sequel*—The gentleman is a business man, and corresponds with me from Louisville. Wrote me last in January, 1832, that he is well, without having had a relapse.

CASE 2,192. — *Three strictures.*—Was treated in April, 1873, with success in two sittings, only two days' interval. *Sequel*—The patient was from Oneida County, and I heard that he remained well for some years. The information came through Dr. Good, after whose death I have not heard from the patient.

CASE 2,204.—*Stricture and gleet.*—June, 1873. In this case the treatment of the stricture cured also the gleet, the latter being dependent on the former. Was kept under observation. *Sequel*—Patient is now established in Utica. Heard from him recently in 1882, that he is well, without having had any relapse.

CASE 2,229.—*Three strictures.*—The patient, a resident of New Haven, was under treatment, September, 1873. The case was tedious and complicated with renal difficulties and paralysis of the bladder. Was cured entirely. *Sequel*—During nine years' observation, the gentleman has enjoyed perfect health, as reported recently by his family physician in New Haven.

This ends our first part. The sequels and observations for ten years of all cases reported in my paper of 1874—thirteen in number—only one case has not been heard from, which being a light one, must be supposed well, as nothing has been known to the contrary.

II.—RECORD OF A FEW NEW CASES, NOT HAVING BEEN REPORTED BEFORE.—Only a few cases will be given here, to avoid repetitions, and only such cases are selected which have been treated so many years ago that the successful result is proven by the lapse of time. Therefore, no recent cases will be recorded. The *modus operandi* and details of the operations will be sufficiently illustrated.

CASE 1,024.—*Three traumatic strictures of thirteen years' standing—Failure of operation and dilatation—Success by electrolysis.*—Mr. L. C——, a resident of Vermont, in 1866 had a fall, and was hurt in the perineum by a rail of a fence, which caused a traumatic stricture. Was operated on by Dr. Bigelow, of Boston. The healing was uneven, and a hard cicatrix remained, which gives rise to a stricture. This cicatrix occasions an irritation and an obstacle to the flow of urine, just as well as to the introduction of a sound. His business necessitates him to travel constantly, which irritates and sometimes causes suddenly a stoppage of urine. On such occasions he needs the help of a medical man at once to relieve him by the introduction of a sound. On one of these occasions a physician made a false passage, which makes the introduction of a sound still more difficult.

In May, 1868, this patient came first under my care. He was in his usual trouble—the stricture had closed, he could not pass water. After eliciting the above history a sound was passed at once, I think, more by accident than skill. But as the turns of his urethra were peculiar, I made the following note for further reference: Pass down into the urethra until the sound comes in contact with the cicatrix, which is five and three-quarter inches from meatus, then withdraw the sound a little, bring it down to a right angle with the body, press downward, a little forward, and then push on into the regular curve into the bladder. He was relieved at once, and the good result was followed up by dilatation with steel sounds. This dilatation gave only a temporary relief. The stricture closed up again in due time.

From 1868 till 1874 this patient came to me in intervals of about one year solely for relief—never for a cure. When he felt the stream getting too small, he got uneasy, and no matter in what part of the country he was, he took the express train for New York, and came straight to my office. There was very little spoken, his errand was known, and I took the instruments in the usual manner, comparing first the explanatory diagram made on his first visit. He generally pulled out his watch, told me he had arrived at seven o'clock from New Hampshire, the next train leaves at ten o'clock, when he must return. This leaves leisure about two hours, which he will give me for the operation. Therefore, he came not to be cured; there was no time for it; he only wanted to be relieved. This was accordingly done, and with fair result.

March 26, 1874.—Mr. C—— arrived again in the evening, more distressed than ever, and therefore with better intentions.

Can hardly micturate, has to strain and only with

difficulty passes a small stream. Meatus will admit a No. 11 sound. Whalebone bougie à boule detects an alteration of the mucous lining of nearly the whole urethra, its touch against its walls conveys a feeling of the finger, like paper and even parchment, the sign of a grave alteration. After two inches down, the whole urethra is a mass of strictures; admitting not more than a No. 6 sound at 5¼ inches from meatus, which spot corresponds exactly to the seat of the old traumatic stricture now nine years old. This third stricture is the worst, as almost all traumatic strictures are. The other two strictures seem to be acquired later, the first is three inches from meatus, which a No. 8 sound scarcely passes. The second stricture is at 4½ inches, admitting tightly a No. 7 sound.

There is an irritation throughout the whole urethra, which is aggravated by the patient's travelling in railroads, the constant jerking causing a nervousness and an inflammation, which has been observed often in patients under similar circumstances. The patient arrived here with the train at seven o'clock P.M., and now thinks he ought to return to-morrow to Vermont; hence the chances for a successful treatment are again doubtful. Nevertheless it was concluded to make the first application of electrolysis.

A weak galvanic battery was used, the wet sponge from its positive pole the patient held firmly in the palm of his hand. The electrode bougie insulated, with a metal end, egg-shaped, No. 11, was introduced into the urethra down to the first stricture, the other end of the sound was connected with the negative pole of the battery, which closed the circuit. The current of the electricity was slowly increased, cell by cell, taking care to keep the electricity as a steady current, without any shocks or interruptions, till fourteen cells were in operation. Progress of the bougie in the urethra was slow, but it moved on steadily until it had passed through all the strictures into the bladder. The third stricture, where the old cicatrix is situated, was the worst, and took about six minutes before No. 11 passed. The electrolitic action was kept up altogether twenty minutes. No pain nor hemorrhage was caused by the operation.

March 27th.—He feels better, passes a large stream; had a good night's rest. Went home to Vermont, but returned again on May 31st. Has felt so well that he comes for a continuation of the treatment; which was done, and the second application of electrolysis made in the same manner as five days ago. Bougie electrode No. 11 passed through two strictures for ten minutes, while sixteen cells were used, then at 5¼ inches the bougie could not be made to sweep around the curve, it being too elastic. Consequently the electrode was changed to a steel sound, and after five minutes went through the worst part into the bladder. The sound was slowly withdrawn, by which five minutes more were used. The whole operation lasted twenty minutes. No hemorrhage nor pain was caused, and immediately afterward he micturated a good stream, admitting that it is better now than for the last eight years.

Patient again absenting himself was not heard of for the next three months. He grew worse and arrived in his usual way on August 31st. The urethra was very much thickened and irritated, and almost in the same state as in March last. The meatus will admit a sound No. 12 old American scale, but is arrested at two inches further on. The seat of the traumatic stricture, explored by a bougie à boule, is so congested and irritated that no instrument would pass by ordinary means. It would not do to risk anything by introducing an instrument which will not pass after hard work. As such a course would even jeopardize the patient's life, a safe and certain plan was made as follows: a small filiform whalebone guide was carefully introduced and with great care advanced forward into the urethral passage. It encountered on its way the old strictures at 3 and 4½ inches from meatus, at 5¼ inches passed with difficulty, and last found its way into the bladder. Then a firm metallic sound was introduced over the filiform bougie, the latter remaining in position and acting as a guide. The sound was made for my purpose of steel, and covered by a smooth surface of gutta-percha solution, by a backing process firmly adhering equally to the steel, and acting as an insulator to the effects of electricity. On the convexity of the curve is a groove for the purpose of allowing the sound to run over the guide easier. On the end of the curve is a small egg-shaped bulb, which is the leader for the electrolysis, and is, of course, not insulated. On the handle of this sound is a small steel wire, to connect with it the negative pole of the battery. This new sound, of the size of No. 6, American scale, introduced over the guide, was firmly arrested at 5½ inches from the meatus; here it was engaged in the old traumatic stricture, and no effort or pushing could move it on. Then this sound was attached to the negative pole of the galvanic battery. The positive pole was held by the patient in the palm of his hand, and the process of electrolysis commenced. The current was increased by degrees from one to eight cells, which made the sound move very slowly through the stricture, and in ten minutes the sound entered the bladder. The electrolytic action was continued, while the sound was slowly withdrawn, altogether lasting twenty minutes. In this case, as in many others, the power and value of the electrolysis is proven beyond any doubt, as no sound would pass the stricture by dilatation, whereas the electrolysis effected the passage by its chemical power of absorption.

September 1st.—Patient rejoices about his improvement, feels easier, has no pain, and passes a tolerably large stream, such as he has not seen for years, and without even a feeling of soreness. He acknowledges his follies, and promises now to come for treatment, as advised. He will not stay here, but will come for treatment as directed. All former efforts were only directed to alleviate symptoms, and the real treatment for a cure commenced with yesterday's electrolysis. According to appointment, patient came to town on September 7th. The large stream of urine has increased since last *séance*, and he feels better in every way.

Electrolysis 2, in the same manner as the last time by metal bougie No. 14, French scale, run over a filiform guide. Eight cells of the galvanic battery were used for seven minutes, when the bougie entered the bladder. The sound was rather tight at the point of the strictures, and without the power of electricity would not move at all, whereas, as soon as the galvanism was added, the instrument soon moved slowly but steadily. This experiment has been tried now often enough to prove that electricity does the work, not simple dilatation.

September 14th.—Electrolysis 3, bougie No. 17, French, passed all strictures in twelve minutes.

September 27th.—Electrolysis 4, with bougie

No. 20 French, passed very slowly and tight with current of fourteen cells, and even on withdrawal made slow progress. This was partially due to an inflamed prostate, which gland was enlarged and thereby encroached on the urethral calibre.

September 28th.—Feels better, had no unpleasant symptom; stream is large, full and forcible, better than for many years.

October 19th.—Prostate gland is normal; general condition is good; fifth electrolysis with bougie No. 22, French scale, passed easier than any time before, without any trouble or pain, ten cells for twelve minutes.

On a subsequent visit patient felt so well that he was considered cured, and ought to be satisfied with a urethra admitting a sound No. 22, French, with a stream of urine correspondingly. Without receiving any further treatment, I heard from him occasionally, and a year ago introduced a sound, No. 23, French, easily. About every six months he tries a sound, just to see if the urethra has not contracted. He continues to travel about, and enjoys perfect health. Last I heard from him was April 10, 1882, when he wrote me a letter from the Crawford House in Boston.

I have related this case *in extenso*, as it illustrates many points in the treatment of electrolysis, and is very interesting and instructive.

Case 2,335.—*Four strictures — Impotence.* — July, 1875.—C. S——, of St. Louis, is troubled with strictures, a consequence of gonorrhœa. Has had other venereal diseases, and suffers now from impotence. Erection takes place only through forced irritation, and even then is incomplete, the penis bending laterally. The sensation in penis is impaired on the right lateral half, whereas it is perfect on the left side. He acknowledges having indulged in all kind of excesses. He also complains of an atony of penis, the member getting smaller in size. He has been treated for the stricture by dilatation by eminent practitioners, without being benefited.

Examination.—Bougie à boule meets distinct alterations of the mucous lining of the parchment feel variety, which travels long distances, from one-half to six inches in the urethra. A large endoscope tube, No. 12, enters meatus easily, but engages in the first stricture and will not pass on any further. There are four distinct strictures, as follows: First stricture is half an inch from meatus; second stricture travels from two to three inches from meatus; third stricture is at five inches from meatus; fourth stricture is at six inches from meatus.

Electrolysis was applied at once. Patient standing in the erect position, had the positive sponge in hand. As negative pole the bougie No. 10, American scale, was introduced into the urethra, nine cells were used for six minutes, in which time all strictures were passed.

For his other troubles external galvanic applications were used.

August 15th. — Electrolysis 2, electrode bougie No. 11. Current of ten cells was used for thirteen minutes throughout the whole urethra. Bougie advanced slow and easy, absorbing the indurated portions of the urethra. No pain, no inconvenience. The third stricture at five inches needed application longest. Ducts were galvanized with strong currents of sixteen cells for one minute.

August 12th.—Electrolysis 3. Positive sponge in hand, negative bougie No. 12 in urethra, nine cells for seven minutes passed all strictures and entered the bladder. Current felt easy and gave no pain.

August 31st.—Electrolysis 4. Bougie No. 14 went through all the strictures into the bladder.

September 16th.—For examination a steel sound, No. 14, was introduced, it passed, but was tight at five inches. No transmission to the fingers was felt at the seat of the other strictures, which shows a decided improvement, and the absorption of the hardened tissues in former strictures.

September 23d.—Electrolysis 5. Last application with electrode bougie No. 16 passed easily and entered bladder without any impediment. Meanwhile his other ailments were treated by electricity in various forms with the best results, so that the paresis and impotence were cured only too well, as he commenced already his old bad habits of excess.

September 25th.—Discharged cured.

Sequel.—Heard from him through friends. He is well and has taxed his regained power only too much. He is a public man, well known, and has too many temptations to indulge in excesses. Has, nevertheless, remained well up to 1882, during seven years, without a relapse.

Case 2,231.— *Gonorrhœal stricture.* — September 29, 1873, Mr. I. L. M—— was accompanied by his family physician from Brooklyn, who was then a patient of mine. He had a gleety discharge, could micturate only with straining, and passed a small stream.

Examination with bougie à boule met a stricture at seven inches from meatus in the membranous portion of the urethra, beginning abruptly and running tight to seven and three-quarter inches.

Electrolysis was done at once with a Stoehrer battery. Positive sponge electrode was held against the thigh. Negative electrode bougie No. 10 was introduced in the urethra down to the stricture; eight cells were used first, and soon after six cells only. The stricture was dilated and passed by the electrolytic action in a few minutes.

October 15th.—The second electrolysis was done with a bougie No. 13, successfully in five minutes, when eight cells were used. I heard that he was well.

November 16, 1880.—I had the opportunity to examine this patient. Found him well, with no relapse, and introduced steel sound No. 13, American scale, in a healthy urethra. Hence no relapse in seven years.

Case 2,256.—*Single gonorrhœal stricture.*—April 22, 1874, R. W——, aged thirty; single; plasterer. Had a gonorrhœa seven weeks ago, took capsules and enough calomel to salivate. Never used injections. Has now a small stream with burning pain. Meatus is large enough to admit a No. 12 sound, but met a firm organic stricture at three and three-quarter inches from meatus. Sound Nos. 10, 8, 6, and 4 were tried in turn, but neither would pass the stricture, which is fibrous and resisting.

Patient was treated in the same way as the previous cases reported, had five *séances* of electrolysis in intervals of about three weeks, the last of which was done July 26th, when a bougie No. 14, American scale, passed the whole urethra easily. He was then well.

Met him in February, 1880. He had enjoyed good health, with no relapse.

Case 2,234.—*Single stricture—Impotence.*—October 5, 1873, D. S——, aged twenty-four years; merchant; was most of his time travelling for his business. He had only one urethritis, which had been checked by a strong injection. He complained of difficult micturition with pain, the water sometimes

mixed with blood. Besides, he felt a general decline in sexual power, and was afraid of getting entirely impotent. On examination with bougie à boule a stricture was found at five and one-half inches from meatus, which was sensitive, painful, and bled on touch. Sedative injections were ordered and some external electrical applications.

October 22d.—Electrolysis with bougie No. 10 as negative passed the stricture with a twelve cells current in eight minutes.

November 6th.—Repetition of electrolysis bougie No. 11, current seventeen cells.

December 12th.—Electrolysis bougie No. 13, American scale, entered easily in a few minutes. The patient is small in stature, and therefore a calibre of No. 13 is a larger urethra than normally can be expected. Therefore he was discharged as cured.

Sequel.—The gentleman travelled to Europe, South America, etc., and for this reason was absent several years from New York. On his return he called. He was in good health, never had any trouble with his urethra; but was somewhat afraid of impotence. I saw him off and on. About six months ago he asked my advice in regard to marriage. The advice, to marry by all means, was followed with fear not to be able to execute his marital relations. Now the gentleman comes for an anti-aphrodisiac, as he got into the other extreme.

Nevertheless he is perfectly well, and had no relapse. I see him often, and he was at my office only a few days ago, June, 1882. Therefore this case has been under observation nine years.

Case 2,339.—*Two strictures.*—September 10, 1875, Mr. B. A——, aged twenty-nine; from Chicago, suffers for the last five years from stricture, which originated through strong injections of chloride of zinc and carbolic acid. He has been under treatment by gradual dilatation, which was carried out to sound No. 9, but was not successful. As soon as the dilatation was discontinued, a relapse followed, and the calibre of the urethra contracted again. The stream is now very small, admitting only a No. 2 bougie.

Whalebone bougie à boule No. 2 passes with ease down to five inches from meatus, where it entangles itself in a fibrous stricture, and with difficulty can be pushed into it for one-quarter of an inch.

Electrolysis. Bougie electrode No. 9, as negative, is introduced into the urethra, positive sponge in hand, current of nine cells for eight minutes. No pain. The bougie advances very slowly, and finally passes through the stricture, which is nearly one inch long. At six inches the electrode is entangled in a second stricture, in which it advances into the curve to nearly seven inches. The whole urethra from five inches downward is a mass of fibrous, cicatricial tissue. A little hemorrhage followed this application.

October 2d.—Electrolysis 2. Negative electrode bougie No. 11 advanced slowly for fifteen minutes, while eight cells were in operation. The tissues are much altered.

October 14th.—Patient has felt much improved, stream is full now, and without any impediment.

Electrolysis 3. With bougie No. 13 for nine minutes, six to eleven cells were used, gradually augmenting and regulating the current of the battery.

October 28th.—Electrolysis 4. Bougie No. 14 with six cells for eleven minutes. Did better than on any of the former applications.

November 26th.—Patient feels well, and wishes to return home. The introduction of a steel sound No. 14 showed that the urethra was restored to its normal calibre, without finding any of the former hardness.

Sequel.—January 11, 1881. The patient called, stated that he had enjoyed good health, without having had any relapse of the stricture. I then introduced a sound No. 14, which passed easily into the bladder.

This case is important, as it shows that electrolysis cured the strictures, without getting a relapse in five and a half years; whereas before the patient suffered for five years, in which time dilatation only relieved temporarily, the strictured parts always recontracting. Hence it proves that electrolysis has not solely a power of dilating, like an instrument, but the chemical action of absorption, which is claimed for it.

Case 2,345.—*Stricture—Gleet—Cystitis.*—January 10, 1877, C. R——, aged twenty-four; was sent by Dr. Brink, of Saugerties. Is distressed with painful micturition, passing a small stream, has gleet and cystitis. Had one stricture at five inches, very hard, so that it could be felt by external digital examination. Patient was treated with suppositories, warm applications, emulsions, etc.

January 20th.—Electrolysis with bougie No. 12, large scale. Battery was weak, just suiting this case, sixteen cells were employed for fifteen minutes most of the time, the electrode being in contact with the stricture, which could be felt as a firm ring, and gradually absorbing, getting softer and yielding. Patient went home, and on his next visit had another *séance*, in which bougie No. 13 passed easily. The whole urethra appeared restored, and patient left for the country.

Sequel.—June 24, 1878. Patient made a visit, reporting that for eighteen months he has been well, without having used an instrument in his urethra. He was then re-examined with a sound No. 13, which passed easily, without finding any trace of the stricture or any contraction. It was also considered that a calibre corresponding to a No. 13 sound, is a large normal urethra, and that our patient never had, nor needed a larger urethra.

Our patient has made a visit once every year, to ascertain if he is all right. On all these occasions I have re-examined with a sound No. 13, once even with a No. 14, and found his urethra healthy.

Case 2,382.—*Three strictures, gonorrhœal.*—May 20, 1877, J. T. R——, aged twenty-four; Baltimore. During eight years has had gonorrhœa five times. Has had orchitis badly several times. Has been treated with bougies, once a No. 16, French, was used, without much benefit. Stream of water is flattened on itself, and then crossing and splitting in two opposite directions. Formerly indulged in venereal excesses.

Examination.—Penis rather short sized, meatus large. Whalebone bougie à boule finds three strictures. First at three and a half inches from meatus, feels on touch like paper. Second stricture is at four and a quarter inches. The principal and third stricture is found at five inches, transmitting to the fingers a feeling like parchment, also an indurated mass spreads from anterior wall of urethra in deeper tissues, encroaching thereby the calibre of the urethra.

Steel sound No. 19, French, feels the first two strictures distinctly, but is arrested by the third at five inches. Steel sound No. 16, French, enters bladder by slow and careful management.

May 26th.—Electrolysis. Bougie No. 11, American scale, with an electric power of six cells for eight minutes, passed all strictures and easily went into the bladder.

May 27th.—Is doing well, with no unpleasant symptoms. Went home to Baltimore and returned as agreed on.

June 16th.—Electrolysis 2. Bougie No. 12 easy, only six cells were used, but for fifteen minutes steadily, and with good effect. Ordered ten grains quiniæ. Felt well, and left for home next morning.

July 8th.—Electrolysis 3. Bougie No. 13 went slowly in bladder; ten cells were used.

August 13th.—Electrolysis 4. Bougie No. 14 passed slowly, with ten cells for twelve minutes. Patient went home, considering himself cured, and feeling excellently.

Sequel.—Has come several times to New York for a re-examination. Every time found him well, and a steel sound No. 14 passed easily into the bladder, without encountering any obstacle.

March 7, 1882.—A letter was received, saying patient feels well, without having had any unpleasant symptoms since.

CASE 2,389.—*Three strictures of sixteen years' standing—Failure by dilatation—Cure by electrolysis.*—June 23, 1877, J. M. E——, aged thirty-two; Boston; has suffered sixteen years from stricture, for which he has been under treatment, without getting much benefit. Most of his physicians have used dilatation, which gave temporary relief, but soon after recontraction took place, making his case worse. Has a burning pain in the urethra and gleety discharge.

Examination.—Meatus is small, but on a stretch admits a No. 11 sound. First stricture is 2½ inches from meatus, which a sound No. 9 will pass; the second stricture is at 4½ inches, allowing a sound No. 7 to enter; the third stricture is at six inches, very small, through which no sound will pass, only a small whalebone guide No. 1, nearly equal to a No. 6 French scale. Micturition always takes him some time and efforts before the water begins to flow; the stream is small and corkscrew like.

Electrolysis. Bougie No. 7 passed two strictures and engaged in the third, where the electric current was continued for some time. The stricture began to absorb, widened, but not enough to let the bougie pass. Further operation was then suspended, having advanced sufficient for the first *séance;* besides the patient had to return to Boston to-day, and therefore could not be overtaxed.

July 7.—Patient came with the night boat from Boston, and reports that he feels improved since last operation. The anxiety is relieved, his stream is natural and larger, without pain.

Electrolysis 2. Bougie No. 15 French passed all strictures and into the bladder. At 6½ inches a soreness is encountered, which bleeds easily.

July 28th.—Electrolysis 3. Bougie No. 19, equal to Tiemann's No. 10; ten cells for five minutes had the desired effect. Tincture gelsemin was ordered, more to relieve the straining in bladder.

August 11th.—He feels better; is improved in every way; gelsemin has done well.

Electrolysis 4. Bougie No. 21, French, equal to No. 11, American, with eight cells electric current for nine minutes, passed with greater ease than any time before.

August 25th.—Examination with the endoscope shows some granulations, which bleed on handling, and were touched with tincture of iron. Then electrolysis 5 was applied, with a bougie No. 24, equal to No. 13, American, which passed nicely through all the strictures into the bladder.

September 11th.—Electrolysis 6. Bougie No. 14, American scale, was worked up well with weak currents.

September 22d and 29th.—Large endoscopic tube passed easily and showed a healthy urethra.

Patient was discharged cured.

Sequel—This patient has enjoyed good health since. In the following year I saw him several times, and for a slight discharge touched a spot in the urethra through the endoscope. Then for a few years I saw him annually, on which occasions an examination was made with a sound, which proved that his strictures remained cured, without any relapse having taken place.

CASE 2,392.—*Stricture, gonorrhœal—Failure with dilatation—Cured by electrolysis.*—August 12, 1877, A. T——, aged forty years; Boston. Is suffering from a stricture for the last fifteen years. Had his first gonorrhœa twenty-five years ago, and for a whole year gleet. The next gonorrhœa he had fifteen years ago, which discharged for two months. Soon after felt that the stream of water became smaller; sounds were passed. He indulged also in venereal excesses; got weak, and his whole constitution run down. He was nervous, and the stream of water became still smaller. Eight years ago a systematic treatment was commenced for the stricture by gradual dilatation, and carried on to large-sized bougies. Afterward an irregular physician gave him medicine and external applications of electricity, after which he had retention of urine. Then he again had a regular physician, who used bougies for dilatation. Next he found an eclectic practitioner in Boston, who used induced currents of electricity, gave him medicine and suppositories with apparent success. The prostate was also cauterized. Then the patient used a mineral water of magnesia and sulphur in Brunswick, Vermont.

August 12th.—At present the stream is small, but generally straight; meatus is a little irritated and red; urethra at times feels all right, at others there is a grating sensation a few minutes after micturition; sometimes has a pain over fundus of bladder, and an internal irritation at the neck of the bladder, running toward the rectum. Is generally costive, very nervous, and anæmic. Urine dark yellow, a little cloudy; specific gravity 1,025; slightly acid, a little mucous, otherwise normal.

Whalebone bougie à boule enters the urethra easily. At four inches from meatus a thickening begins in the walls of the urethra; it feels like paper; more so in the anterior wall. The first stricture begins at five inches, where the mucous lining is more indurated; a sound No. 9 passes in, and is arrested at 5¼ inches, where the stricture is still smaller and more fibrous. A sound No. 8 passes the end of the stricture and then slips into a wider canal. At seven inches another stricture and induration is encountered; then bougie passes on easily, and at 8½ inches enters the bladder. The prostate is not enlarged; the endoscope shows no granulations; urethra looks rather anæmic.

The treatment for these strictures was electrolysis by weak currents and prolonged sittings. Four *séances* were held from August 12 until September 24, 1877. Electrode bougies gradually increased from No. 9 to No. 12, large American scale. One application lasted twenty-three minutes, but the current was weak, so that not the slightest pain or even inconvenience was caused. The absorption of the strictures was perfect, and patient left well.

(To be continued.)

A PLEA FOR A MORE THOROUGH STUDY OF CHEMISTRY IN MEDICINE AND THE ARTS.

By J. H. BILL, M.D.,
SURGEON, U. S. ARMY.

An architect about to build a substantial house plans a solid foundation for the structure; only shanties rest on the ground of totter on poles. Usually the foundation is invisible, but we feel sure of its presence notwithstanding. Every fine house has a foundation.

The figure, when applied to education—in the present instance to medical education—although well worn, is too apposite to require apology. Much of the present medical education is mere shanty-building.

To be definite, I would call attention to the neglect of chemistry and physics as a foundation for a sound medical education. The fact is notorious, although the evidence thereof is somewhat indefinite. I offer these remarks without hesitation, for I think I can supply this evidence.

For several years past the writer has been a member of a board for the examination of candidates for the position of assistant surgeon in the Army. This board has searchingly examined over five hundred men, graduates in medicine, many graduates in arts also, but of this whole number not more than two or three had any knowledge of the elements of chemistry, and most were ignorant of the fundamental principles of physics. So flimsy is the chemical smatter possessed by most of the candidates that it has been found difficult to propose questions within their comprehension. The few men who satisfied the board that they understood the principles of chemistry, got their chemical education before studying medicine. I am satisfied that the so-called courses in chemistry of our medical colleges fail entirely in their object. To show how hard pressed the board has been and is now, to find questions sufficiently simple, I give some of the questions actually propounded. These questions will fairly represent, in point of difficulty, the ordinary average examination:

Name a poisonous alkaline earth.

Mention by name four monatomic alcohols.

Give the qualitative composition of urea—of uric acid.

Formulate the process commonly used for making hydrogen gas.

What is common aldehyde?

How is phosphorus obtained?

What is plumbago? What is silica? Does it occur in the vegetable kingdom?

Is casein a nitrogenous body? Is gelatine?

Cause and removal of hardness of water.

Antidote for poisoning by salts of barium.

Difference between quantivalence and equivalence.

Fundamental law of the refraction of light.

What is chromatic aberration, and how prevented?

What is the "return-stroke" of meteorology?

How is the rainbow produced? Explain the secondary bow.

Explain the phenomenon of fluorescence.

What is specific gravity, and how got?

Cause of pitch of musical sounds.

Name four sources of electricity. How is the electricity used in lighting got?

How does a double-convex lens magnify?

The board has been limited to questions of this easiness because candidates could not answer more difficult questions, and most failed to answer even these. It should be considered that most candidates prepare specially for this examination, taking from one to six months, and that the whole tenor and scope of the examination favors the man who really has something to exhibit.

It is a matter of the utmost importance that both instructors and pupils should recognize the importance of a thorough grounding in the physical sciences before the study of medicine proper is begun. It is very certain that the higher rewards in medicine will be for those who have been educated in this manner, especially in chemistry, and if we expect in the future to lead in medical research, as heretofore we have been contented to follow, our students must begin the study of medicine with a more intimate acquaintance with the sciences from which medicine draws assistance. Among these sciences chemistry is the most important for a beginner to have mastered.

In the first place the study of chemistry adds to the stock of useful knowledge, particularly useful to the medical man—often indispensable to him. There is little to be said about the advantage of this kind of knowledge, for all will admit, the more of it the better. The trouble, however, lies with the memory. We are most of us not Macaulays. We forget far more than we know. But the man of weak memory need not despair on this account, for, if knowledge is once properly got, although in the stress of more practical studies, or living pursuits, it may be crowded out and hide itself, the mind nevertheless will be able without hesitation to refer to the treatise where the fact or theory mislaid, but not lost, is preserved. A scientific man is no more expected to carry his knowledge around with him in his head, than is a surgeon expected to carry his armamentarium in his coat pocket. It is knowledge still, only not ready knowledge. The facts of chemistry and physics, on which physiology now rests, we must of course keep before us and carry with us. Such are the established laws of hydraulics—light, sound, and electricity (as refraction, induction, vibration, etc.), and in chemistry the composition of the blood and of the aliments—the changes effected by respiration, digestion, exercise, etc., the chemistry of urea, uric acid, glycogen, etc. These are a very few among a great many chemical facts that a physiologist must know and keep in sight. Most students find these facts difficult to master in the school of physiology.

In the second place chemistry properly studied will cultivate the intellectual powers in the best manner, and form mental habits of the greatest value to the scientific medical man. Its capabilities of developing both analytical and synthetical power are almost as great as the mathematics, and with this superiority over the mathematics, that its training is more practical, its analysis and synthesis is more like that of medicine and the habit of thought, and action which it engenders resembles that which every scientific medical man should strive to hold.

Let us briefly review the process by which a chemist analyzes a substance.

Take the simplest case. We first effect the solution of the substance, we then acidify with chlorhydric acid, by this silver will be precipitated. Left in solution we have copper, mercury, lead, bismuth, etc., iron, chromium, zinc, etc., the alkaline earths

and the alkalies. We add to the solution sulphydric acid gas. The copper, mercury, lead, and arsenic, antimony, and tin groups of metals are precipitated, the first dark, the latter light colored. The solution contains the iron, zinc group, the alkaline earths, and the alkalies. Ammonium sulphydrate precipitates the iron group, the solution contains the earths and the alkalies. Ammoniums, carbonate and chloride, precipitate lime, baryta, strontia, leaving magnesia and the alkalies in solution. Sodic phosphate precipitates this magnesia, the solution contains soda, potash, and lithia. We add chlorhydric acid, evaporate to dryness, and exhaust the chlorides with ether so we get lithia in solution and potash and soda in the form of chlorides, whose aqueous solution can be tested. But no residue in our supposed case is left. We therefore test the ethereal solution by the flame, and if this is satisfactory our experiments have told us two things, first, that lithia is present, and second, that all things else are absent.

We can apply this method to medical research, as for instance, a patient complains of "shortness of breath." The temperature and pulse are about normal, this excludes all active inflammations, including acute pleurisy, pneumonia, etc. There may be present chlorosis and leucocythæmia, emphysema, hydrothorax and pulmonary apoplexy, heart disease, aneurism, intercostal neuralgia or rheumatism, and Bright's disease. Auscultation and percussion, etc., show that the air is properly penetrating all portions of the lungs; apoplexy, hydrothorax, emphysema are, therefore, absent. The microscope shows the blood-cells normal; chlorosis and leucocythæmia absent. The chest expands without let or pain; no neuralgia or rheumatism. There is no palpable tumor nor abnormal sound heard over the great arteries; aneurism excluded. There is something wrong about the heart, this means valvular disease or Bright's disease. The rhythm of the heart-sounds is perfect; no valvular disease. There is hypertrophy of the left ventricle; Bright's disease present. We confirm by the test-tube and microscope. A case, of course, can hardly occur with the simplicity and freedom from complications set forth. As a diagram it will serve our purpose to illustrate the application of the analytical method to medicine. I think that skill in the analytical method of chemistry will bring skill in the analytical methods of medicine.

But there are certain habits of thought and action produced by analytical chemistry that are of the greatest value to the medical man. If we train a lad (and the training may commence at thirteen years of age) in analytical chemistry, what habits will he get?

Firstly, his judicial power is increased. He learns particularly to suspend judgment. For example, let a dark blue solid be presented for examination. To an untrained mind the temptation to guess its composition is almost irresistible. It is blue, it is solid, the man who presented it is a dyer, it looks like indigo—in short it is indigo; so says the man untrained. The chemist says nothing. Resting in the faith that his science will presently give him the information sought, he is quite agnostic, almost incurious. The substance is what it shall prove to be. This is all to him. He applies his analysis, and is told that the substance is prussian blue. Every man who practises medicine, and every man who makes research in medicine, must have this power of suspending judgment. Most get it only after they have practised for some time and with tribulation of the spirit. He who already before studying medicine has been taught to believe that "we shall see—what we shall see" has a great advantage while his shingle is yet green. This point is obvious and needs no further illustration.

Secondly, and flowing from the first advantage, is humility and docility—teachableness, if I may use the word. A true chemist feels after a while that he knows nothing but what his analysis tells him, his mind is like a blank tablet on which a higher power is to write the truth. This makes him humble, makes him all his life a learner, his mind ever receptive. Such an one is not ashamed of his mistakes, and is able to take advantage of them. A physician so trained will as readily tell of his failures as of his successes.

Thirdly, chemical analysis teaches precision. This is particularly true of quantitative analysis. Milligrammes are usually very insignificant particles of matter, but analysis enforces respect for them. There is not a great difference between orange and yellow, yet one may mean antimony, the other arsenic. In this direction its discipline is as rigid and inexorable as is that of the mathematics. In examining candidates it has seemed to me that the most frequently occurring mental defect is lack of precision of thought and of method, and from this comes all the parrot talk about "impurities of the blood," "concoctions of the humors," or "spinal depravity," or what not, according to the fashion of the time.

Fourthly, allied to precision is cleanliness. Analysis demands absolute purity. Witness the scrupulous care taken in juridical examinations for arsenic, or other poisons. A test-tube may look perfectly clean, but the careful analyst will never assume that it is so; he makes it so. Thus only can he be sure that the results he gets belong logically to the operation he has performed. Trained in chemical analysis the cleanly scientist will not allow a method or an argument to plant itself in his work, to mar, or weaken his statements of facts, or discovery. A finical cleanliness is as important in the physician as in the chemist. It is essential to prescribing Each substance ordered not only should have a precise object, but all other substances, not clearly indicated, should be excluded as matter in the wrong place, or dirt. So, too, incompatibilities will be remembered, and avoided. As an instance of scientific uncleanness I may mention the supposed discovery of a syphilitic germ, a few years ago, when the investigator mistook an unimportant and uncharacteristic body for an organization peculiar to syphilis. The supposed discovery of a measles germ in hay was accounted for in the same way.

Finally, analysis encourages a habit of truth. It will not reform a liar, to be sure, but it will teach a man at least not to deceive himself. It will teach him to discipline his hopes and wishes, and subordinate these to facts. By nature we try (and always succeed) to persuade ourselves that things are as we wish them to be, that facts are as we preconceive them to be. It is wonderful to what extent the ordinarily truthful man will deceive himself. But a man who has formed the habit of reporting his chemical work in simple truthfulness will probably carry the habit into his medical life. A student making his first autopsy should feel no temptation to find wonders. His business is mechanically to report what he sees or what his other physical senses tell him, without adding to or taking away. He must forget how to gloze.

A student, from the pharyngeal spasm and other symptoms of hydrophobia, may theorize that the disorder is the result of disorganization of some centre in the medulla. Presently he has an autopsy of a patient dead of the disease. Unless he knows how to govern his feelings he really sees the centre harder or softer (as the case may be) than normal, because he knows it ought to be so if his theory is true. He has gone out to make facts, not to find them. He has made a confusion which some one must put in order. It is not the intentional liar who harms science (and the best of men morally may be quite incapable of telling the scientific truth), but it is the man who has not learned to distinguish fancies from facts.

But the study of synthetical chemistry as an educator, may also be made of the greatest use to a medical man. Most of the daily routine work of the physician is synthetical. It is important that it should be trained synthesis. A woman consults a physician for a mysterious painful affection of the knee-joint, which has bed-ridden her for years without worsening. A little examination shows the doctor that there are no facts here to discover beyond what the woman tells. He properly forms a theory or guess. He says to himself this woman has hysteria. He then searches for those symptoms that are signs of hysteria, but meanwhile begins a treatment which, if successful, may be the best sign of all. Circumstances frequently force this method upon us. The process is quick, the result brilliant, but for the untrained the method is dangerous. The uneducated man is always forgetting that his guesses are not necessarily facts. The speed is exhilarating, he seems to cut a dash, but it is soon evident that the horse he thought he was driving, is really running away. In the case we have already considered he will rashly tell the man who complains of dyspnœa that he has *the* asthma, deliver him a lecture on the bronchial tubes, and drug him with chloral or cannabis. For the sake of speed or his own ease, or for ostentation, he has failed to use a method which at least would have given him safe results, and he has needlessly used a method that gives safe results only when used with prudence and care, in an imprudent, careless manner. To synthetize properly is to guess first, and then find facts in support of the guess. He guessed the man had asthma, but he did not trouble himself to find facts to prove it.

In scientific medical research this vicious style of guessing is even more prevalent.

The practice of synthetical chemistry, or even the careful study of the synthetical labors of others, will teach a man the scope of synthesis in medicine, for the conditions of its exercise are about the same in medicine as in chemistry. As we have seen the physician making his guesses, so also the chemist guesses. He guesses, for instance, that a substance has a certain composition, and he records that guess in a constitutional formula. He then tries to make the substance by putting the elements together. If his hypothesis is correct (his chemical knowledge being sufficient) he will succeed in doing this, and his success proves his proposition. But how many fine-spun theories—as, for instance, the constitution of uric acid—when the attempt has been made to verify them synthetically, have come to naught. The young synthesist, like a young setter, learns more from the mistakes than from the successes of himself and others; the wariness and ever-present consciousness of fallibility created by these failures and mishaps are qualities of the highest scientific importance. The practice of synthesis in all science after this wariness has become second nature is a matter of scientific imaginative power; in a word, of genius. This imaginative power can be greatly increased by practice, and synthetical chemistry will increase it for use in medicine. Here, then, are two capital advantages resulting from the study of synthesis in chemistry.

Few students can practise synthetical chemistry, for few have the ready knowledge, to say nothing of the time and material; but every student can examine the labors of others, and as synthetical chemistry is as yet meagre (being not yet fifty years old), it will be an easy task for the apt student to master the methods and results already obtained. Among these synthetical studies stand, first, Liebig's and Wohler's experiments on the artificial production of urea, Frankland's method of making the radicals from the corresponding alcohols by acting on an iodide of the radical with zinc, the method of ascending an homologous series from one alcohol to the next above in the series by saponifying the cyanide of the alcohol from which we wish to ascend, and so getting the acid pertaining to the alcohol to which we wish to ascend, and thence the aldehyde, and then the alcohol itself; the making of the higher benzenes according to the process of Fittig and Tolens—as toluol xylol, etc., from benzol—with the light thrown into the benzine group, as well as the creation of many isomeric hydrocarbides previously unknown (a most beautiful example of synthetical practice), the discovery of the polyatomic alcohol series by Würtz, the labors of Hoffman and Perkins in the coal-tar products, and later, the syntheses by Kekulé, Bayer, Grabe, and Lieberman of alizarine and indigo. These are some—perhaps a third—of the synthetical processes of chemistry. After he has mastered the details of these processes, the student can try some synthesis for himself. Let him imagine the constitution of any organic substance, and then let him hunt for facts supporting his hypothesis. It is in this way that the student can learn the scope and true place of the imagination in science, both medical science and science in general.

I have said nothing of the fascination of this study as compared with the dry didactics and legerdemain of the chemical lecture course, nor of the beauty of the several processes, the ingenuity of the methods, the fertility of the invention, the logical sequence of the results, the feelings of surprise or admiration as some long vista of chemical relations is brought into view. The able instructor can understand the advantage he has with his pupils when mental discipline and pleasurable emotions flow from any course of study.

The need of the present is not a post-graduate but an ante-medical course. If a man has but three years to devote to medicine, he had better spend the first year in the exclusive study of chemistry and physics, and chiefly in the laboratory and closet. I do not believe that there can be much progress in scientific medicine in this country until great changes are made in the preliminary training in chemistry and physics.

NEW YORK, August 1, 1882.

AMYL NITRITE.—An Italian physician asserts, from practical tests upon rabbits, that amyl nitrite is not an antidote to chloroform as has been stated.

SOME OBSERVATIONS ON THE PROPHYLAXIS OF HÆMORRHOIDS,

And their Treatment by the Methods of Dilatation and Hot-water Irrigation.

By JUNIUS LEVERT POWELL, M.D.,

Assistant Surgeon U. S. Army.

Apropos of two excellent papers which appeared in the Record of May 13th and 20th, on the treatment of hæmorrhoids by the dilatation of the anal sphincters, I have been induced to formulate some views of mine upon their prophylaxis and treatment, a part of which are founded upon the known effects of a certain surgical procedure, when applied to other pathological conditions, and which I propose as an auxiliary measure to the method by dilatation.

A thorough knowledge of the anatomy of the lower bowel, in connection with the operation for malignant growth of that organ, is an important item, it is true, for upon the nature of the histological elements, not only of the tissues about the anus, but for some distance above it, is the surgeon enabled to judge of the possibility of reconstructing out of new material brought down from above, an organ fully capable of performing an office that nature never intended it should perform. This vicarious function, imposed upon what at first sight would appear to be totally dissimilar structures, is but a single instance of the vast field of resource which scientific research is, from day to day, opening up to be utilized by surgical skill; but so far as this knowledge affects the treatment of hæmorrhoids, it is questionable whether it is a matter of such vast practical value. Whether we have one or more sphincters, or whether we shall designate by the name of sphincter one or more annular aggregations of normal muscular tissue of greater or less volume, at various distances from the external orifice, does not materially affect the result of treatment in case of the malady under consideration. Hæmorrhoids have their seat in the lax submucous tissue of the rectum about the anus; and, when external, in the loose connective-tissue sheath, so to speak, which surrounds the sphincter ani. The causes of this condition cannot be summed up in a single word, but may be said to proceed from several sources. They may be local, or they may be systemic, the local pathological state consisting of a congestion of the venous radicals distributed to the structures above alluded to. This is all clear and simple enough, but when we go to speak of the *fons et origo* of the trouble, we are dealing with a somewhat more difficult problem. The majority of cases of piles that I have met with give the history of a troublesome local itching about the fundament, preceding for a longer or shorter time the venous engagement. This I believe to be eczematous in character, and in many instances, upon close inspection, have I been able to discover here and there, on the inner surface of the sphincter, what appeared to be a matured vesicle. At the same time, the entire muco-cutaneous surface is dry and hot, and deficient in any lubricating secretion to facilitate the passage of fæces. The consequences of this condition are apparent. *Ubi irritatio, ibi afflucus.* We, in turn, have as an effect the venous engorgement, which eventually ceases to be an effect, but itself begins to reinforce the already existing cause. Thus, a coagulum of blood, whether located in a dilated pouch, formed from any portion of a venous radical, or extravasated into the loose connective-tissue adjacent to the part, acts just as would any other foreign body.

I have thus alluded to what I conceive to be the most potential local agencies in bringing about piles, while I dare say there are others of minor value which might be taken into consideration. But this paper is not intended to be a complete essay on the subject of hæmorrhoids. Its purpose is merely to bring to the front, and emphasize them, points in the pathology of this morbid state which do not appear to have been invested with the importance they possess as factors in the development of the disease, and from them to deduce the most rational modes of treatment. Having spoken of the local causes, I shall now speak of the systemic. This involves a consideration of the venous distribution to the rectum and anus. If, as M. Verneuil maintains, the superior hæmorrhoidal veins are only in connection with the portal system, and form internal hæmorrhoids, while external hæmorrhoids are formed from the middle and inferior hæmorrhoidal veins, which are connected with the general venous system, and do not, except perhaps in the most remote degree, form connections with the superior hæmorrhoidal veins, then we have something like a key to open the way to an explanation of the modus operandi of internal medication, and a guide for the indications in treatment.

Internal and external hæmorrhoids thus become amenable to different measures for their relief, or rather those which apply to the one are not so applicable to the other. It is self-evident, that whenever an obstruction is offered to the free flow of the blood through any of its channels, there must be a backward stasis, beginning at the point of obstruction, and this is a condition we frequently meet with in the abdominal circulation. All those causes which produce congestion of the viscera of this region, such as chronic malarial poisoning, protracted exposure to a hot southern sun, or what not, are likely to be followed by such a result, and hence we may naturally expect to note as one of the consequences of an engorged liver, spleen, or intestines of long duration, a similar condition of the venous plexuses distributed to the lower bowel. But, while this is true, I do not mean to assert that there are not other conditions which tend to superinduce this varicose state, such as a faulty nutrition of the coats of the vessels, associated with or consequent upon a defective nerve-supply, by which they lose their tone. However, it is to this engorged state of the venous plexuses, when in an advanced stage, that we apply the name of internal piles, and it is to this condition that I wish to address some remarks, as to mode of treatment. To be brief, I shall illustrate it by citing the following case: J. J. H——, a soldier of Company "C," 1st U. S. Infantry, a man some forty to forty-two years of age, and quite intemperate habits, was admitted to the Post Hospital, at Fort Stockton, Texas, on July 8, 1881, suffering with hæmorrhoids. He had been treated at a distant station, and the papers had been made out for his discharge from the service, on the ground of total disability. When I examined him, I found two or three tumors about the external orifice of the anus. He stated that at stool, the bowel was in the habit of prolapsing outside the sphincter, and that the act of defecation was attended with the discharge of blood. An examination by introduction of the finger into the rectum was unsatisfactory, though I was satisfied there was an unhealthy condition of the mucous membrane of the bowel. Having the

night previous administered a brisk cathartic, and on the following morning directed a good-sized enema, I determined to dilate and make a thorough ocular examination, which I did, the patient being under ether, by introducing my fingers into the mouth of the bowel, as one would into the mouth of a tobacco-bag that had been tightly closed by drawing on the string. I stretched the sphincter as far as the walls of the outlet of the pelvis would permit, and made a satisfactory survey of the interior of the bowel, which I found in a congested and relaxed state for some distance up, with two or three prominent varicose enlargements, sessile in character, and located just above the sphincter. While an assistant aided me in keeping the sphincter on the stretch, I applied nitric acid freely to the enlargements I have spoken of, but left the other portion of the bowel, which presented the appearance of a mass of coagulated blood, and had a gelatinous pulpy feel, in an undisturbed state. The external tumors I ligated and split open. The man suffered with trifling constitutional disturbance, and in a few days I inaugurated a mode of treatment, to which I wish to direct especial attention. This was the daily irrigation of the bowel, with water, as hot as the patient could bear it. The method I adopted to effect this was the introduction of a large-sized silver catheter up into the gut, until the fenestra near its point had just cleared the internal sphincter, along side of which I subsequently carried the nozzle of a Davidson's syringe, with the other end resting in a vessel of hot water. This plan might have been effectually carried out with the patient in the recumbent posture, the buttocks resting on the edge of the bed, but as it was, he was able to stand, so I directed him to lean over a chair, while the pumping process was carried on. At each compression of the bulb, the water returned through the catheter into a vessel placed to receive it, but now and then, in order to be sure the entire hæmorrhoidal surface was reaping the benefit of the hot irrigation, an assistant, who held the catheter in place, was directed to place his finger on the end of it, thus acting as a sort of stop-cock to allow of the accumulation of the water in the bowel, upon the removal of which it again resumed its flow. At the end of some weeks, I had the satisfaction of being able to discharge the man from the hospital entirely cured.

As I have already observed, the effect of water, at a high temperature, when continuously applied to the tissues, is perfectly well known, but I have seen no mention of its use for the purpose or after the manner I have indicated. Dr. Emmet, in his admirable work on gynecology, asserts that hot water vaginal injections, when used for the various forms of disease in the female organs of generation, have not merely a local effect, but are more far-reaching, and directly or indirectly influence the whole pelvic circulation. Of course, the vascular supply to the rectum must be covered by this observation. If, then, hot water will effect, as thus applied, what is claimed for it, we have in it a simpler and a safer method, and one easier of application to the relief of a disease which has heretofore been relegated to the domain of grave surgical procedures. The medicinal or internal treatment next claims attention, and constitutes, in certain conditions, no unimportant auxiliary to the surgery of hæmorrhoids.

From time immemorial an important measure in the treatment of piles has been to keep the bowels open, since one of the most constant conditions to be combated is constipation. Nothing in my experience has given such satisfactory results in bringing about a regular and laxative state of the evacuations and in relieving the chronically engorged state of the abdominal viscera, when it exists, and which I have termed systemic, as the use of the Hunyadi János mineral waters, taken in appropriate doses an hour or so before breakfast. Except in a very few instances, the effect is sure, prompt, and easy, and the patient is not left after its action with his bowels more firmly locked up than before.

For the pruritus in and about the fundament, or whether the itching exists or not, I prescribe, as a local application, a little sulphur, about gr. x. to vaseline ʒ j., and direct the patient, about once a day, especially if there is any disposition to the formation of tumors on the external anus, to bathe the parts well in water as hot as he can bear it, using a soft sponge in the process. I believe the hot water, besides being a nerve-stimulant, is also an active promoter of absorption, and thus assists in hastening the removal or checking the formation of blood-clots. Indeed, I am persuaded that nine-tenths of the cases of hæmorrhoids that we meet with could have been cut short by the timely and vigorous application of the local treatment here recommended. Cold water I never direct to be applied, believing it to be positively harmful. As Dr. Emmet says, "cold is a prompt exciter of reflex action, by which the vessels are made to contract, but on reaction taking place, the parts will become more congested than before, both the arteries and veins being distended." After the hot water the parts are to be wiped dry with a soft towel, and the vaseline compound to be well applied to the external and internal surface, halt as far up as the index finger will reach. Nothing I have ever applied has so soothing an effect as the sulphur and vaseline, and if done in the morning upon first getting up, it promotes an easy evacuation from the bowels soon after breakfast. I should state here that I have used the vaseline without the sulphur, and that the results were not so satisfactory.

I well remember when I was a student of medicine in what haphazard way the old ung. stramonii was employed in every case of piles that came along, regardless of the varying pathological states to which they might be incident. Besides, nearly all the old salves, ointments, etc., under favorable conditions of heat, are subject to chemical change and become rancid. By this process the fatty acids are set free and become an irritant to any sensitive surface. Vaseline undergoes no such change, but will remain upon the part indefinitely without alteration. I have thus briefly touched upon some points regarding the subject of hæmorrhoids, which I think are not universally considered, and I have been led to do so by the large amount of unnecessary suffering I have seen from this cause. A large part of this, as I have said, I believe can be averted by very simple measures in their earliest stages, and when further advanced, permanently relieved, without danger or detriment to the patient, by a scrutinizing investigation into their exact pathological features, upon which alone can be founded a rational mode of treatment, the outcome of scientific principles.

FORT STOCKTON, TEXAS, June, 1882.

THE POWDER OF THE PYRETHRUM, or common insect powder, is recommended very highly for *pediculus pubis*.

PURULENT CYCLITIS FROM SEPTIC EMBOLISM OF THE EYE, IN A CASE OF PHLEGMONOUS ERYSIPELAS.

By HENRY G. CORNWELL, M.D.,

COLUMBUS, O.,

CLINICAL LECTURER ON OPHTHALMOLOGY AND OTOLOGY, STARLING MEDICAL COLLEGE, COLUMBUS, O.

Miss L——, aged thirty-two, brunette, of Youngstown, O., was, about April 1, 1880, attacked with facial erysipelas of idiopathic origin, which soon after assumed a phlegmonous type. Two weeks later her physician, Dr. Matthews, asked me to see her for an eye disease which had developed four days before.

On examination the lower part of the face of the patient was found to be much swollen, and at a point on the left side, where the mucous membrane of the lips joined the integument, some pus escaped. The lady had for some years been the subject of dyspepsia, which exhibited itself in an obstinate irritability of the stomach, together with nausea and vomiting, since the development of the erysipelas. The sight of the right eye became impaired four days previous, attended with pain and photophobia when it was exposed to light. Examination revealed lids somewhat swollen, circum corneal injection, tenderness in ciliary region, no chemosis, cornea clear, an hypopyon about three millimetres in depth, iris of normal lustre, pupil moderately contracted, responding slowly to light and to a four-grain solution of sulphate of atrophia, which caused it to dilate to about one-half the size that would be obtained in a healthy eye. T.—2, vitreous cloudy, so that the fundus of the eye was not revealed on ophthalmoscopic examination. Vision, ability to count fingers at five feet. For this condition a four-grain solution of atrophia was used every three hours, and cloths wrung out in hot water applied to the eye after varying intervals, for as long a time as the strength of the patient would permit. The treatment for the erysipelatous disease was stimulating and supporting in character. Two days later the circum-corneal injection was less intense, and the hypopyon diminished in quantity. Vision, ability to count fingers at two feet; eye tension same as before. Three days later the hypopyon was almost entirely gone. The other conditions were the same. Two days later the injection in the ciliary region was limited to the upper half of the periphery of the cornea. Tendernesss in this region manifested on pressure; pupil partially dilated by the atrophia solution; no adhesions of the iris to the lens; pupillary space circular and filled with rich yellow pus; small hypopyon. When the patient was raised from the dorsal recumbent position, the pus escaped from the pupillary space and formed an hypopyon of considerable depth. Globe very soft. Vision, perception of light. No marked changes were exhibited in the erysipelatous affection during the time the condition of the eye was under observation, except that the discharge from the lip ceased after the fourth day. The left eye remained unaffected. The patient died from exhaustion April 24th, two days after the last noted eye symptoms were observed.

Septic embolism of the eye is very rarely observed. Its etiology was first discovered by Virchow in 1856 (*Arch. für Pathologische Anatomie*, bd. ix., p. 307, and bd. x., p. 175). This observer pointed out the fact that panophthalmitis could have its origin in embolic obstructions in the circulation in the vessels of the choroid or retina, due to the entrance of septic material into the blood. A further consideration of the etiology of the condition will be given in the latter part of the paper.

The conditions which have this form of eye disease as a complication are manifestly various. First in point of frequency may be noted puerperal diseases, the whole number of which reported exceeds that of all other conditions put together. Of the forty-eight histories of cases from all causes I have before me, the eye inflammation was due to puerperal disease in thirty (Virchow's,[1] Hall and Higginbottom's,[2] Mackenzie's,[3] Martin's,[4] Hirschberg's,[5] Knapp's,[6] Hosch's collection,[7] etc.). In the others the causes vary as follows: Ligation of varicose veins,[8] ligation of carotid for aneurisms,[9] diffuse cellulitis of forearm,[10] phlegmasia dolens,[11] boil on opposite cheek,[12] after amputations,[13] crushing of leg,[14] pulmonary tuberculosis,[15] suppurating tumor of the neck,[16] suppurative cystitis after tabes,[17] suppurative inflammation of fingers,[18] removal of hymen,[19] amputation of *cervix uteri*,[20] retained placenta,[21] and facial erysipelas.[22] Of these forty-eight cases thirty-nine died. Of thirty-four cases, in twenty-nine both eyes were affected, and of these only two lived.

The terms "metastatic choroiditis," "metastatic uvitis," and "metastatic irido-choroiditis," often used, are, it seems to me, incorrectly applied to this disease, since it has been ascertained that other parts of the interior of the globe—the retina (Meckel, Hirschberg) and the iris (Leber, Landesberg)—may be the starting-point of the suppurative process. Hirschberg very clearly puts the views of most observers in the following paragraph ("Puerpural Septic Embolism," *Arch. of Ophth.*, vol. ix., No. 4, p. 382. Vide also Knapp's cases of simple choroidal embolism, *Arch. of Ophth.*, xiv., 1):

"Simple embolism of a retinal artery causes instantaneous blindness of the eye affected, with the well-known ophthalmoscopic picture (thread-like retinal arteries, gray œdema of the retina, produced by optical contrast) and terminates in atrophy of the optic nerve and retina. Septic embolism, whether of a retinal or choroidal artery, causes rapid disturbance of vision, usually accompanied with immediate haziness of the fundus oculi, and terminates in purulent inflammation of retina, vitreous, choroid, iris, etc. Septic embolism of a very small branch may leave a remnant of vision for a few hours, or even days, until suppuration gains the upper hand in the fundus oculi, and total blindness ensues.

---

[1] Virchow's Archives, ix., p. 307; x., p. 175.
[2] Medico Chirurgical Transactions, vol. xv., p. 120. London, 1829.
[3] Diseases of the Eye, p. 573. 1855.
[4] Zeitsch. f. Geburtsch, bd. ix.
[5] Arch. of Ophthal., vol. ix., No. 4, p. 377. Centbl. f. Augenheilk. 1878.
[6] Arch. of Ophthal., xiii., 1, p. 127. 1867.
[7] Ibid., bd. xxvi., 1. p. 177.
[8] Mackenzie: Diseases of the Eye. p. 572. 1855.
[9] Loc. cit., p. 572, and foot-note, p. 574.
[10] Loc. cit.
[11] Loc. cit.
[12] Loc. cit.
[13] Bowman: Lectures on Parts Concerned in Operations on the Eye, p. 123. London, 1849. Also Becker: Atlas der Pathol., Typographie des Auges, heft ii., p. 82. 1878.
[14] Bryant: Lancet, Jan. 22. 1878.
[15] Schmidt: Arch. f. Ophthal., bd. xviii., 1, p. 18.
[16] Loc. cit.
[17] Hirschberg: Centbl. für Augenheilk., ix., p. 299. 1880.
[18] Leber: Arch. für Ophthal., bd. xxvi., iii., p. 201.
[19] Förster: Beziehungen der Allgemeinen-Leiden und Organ-Erkrankungen zu Veranderungen und Krankheiten des Seh-Organs, p. 183.
[20] Loc. cit.
[21] Loc. cit., p. 184.
[22] Author's case.

Simple embolism of the same branch could not, perhaps, be diagnosticated."

The term "puerperal septic embolism of the eye" is manifestly too narrowly applied, since the suppurative disease bears the same character after different causes.

The case I report differs from the other on record in the form of destruction of the globe. It was not a violent inflammation with marked chemosis, ciliary pain, exudations into pupillary space, swelling of the lids, total loss of sight, etc. But was insidious in its development and progress, the eye retaining vision, which at its worst was sufficient to distinguish readily between light and darkness. Its prominent features were, at first, ciliary injection of moderate intensity, clear pus in pupillary space, together with slight hypopyon, cloudy vitreous, extreme softness of the globe, the cornea and iris not involved.

I am inclined to the opinion that, in this case, the embolic plug found a lodgement in the ciliary body, the suppuration extending backward to the choroid later in the progress of the disease.[1] The elements on which this opinion is founded are:

First.—The vision; ability to count fingers until within a few days before death. With a few exceptions, in the reported cases of this disease, all perception of light was lost very early in the course of the affection. Hirschberg notes exceptions in the last lines of the above quoted paragraph, but it seems to me that these are not applicable to this case.

Second.—The extreme reduction of the globe tension, not attended with other evidences of violent purulent inflammation, viz.: chemosis, severe circum-orbital pain, swelling of the lids, etc., together with the sight as above recorded.

Third.—The formation of so great a quantity of pus that when the patient was lying on her back it filled the pupillary space and formed an hypopyon.

We can imagine a purulent inflammation to have its starting-point in this part of the eye, due to obstruction of a vessel by a septic plug, exhibiting the features noticed in this case, the pus being poured into the posterior chamber from the free ends of the ciliary processes; the nutrition of the vitreous suspended, together with a reduction of the volume and the formation of opacities in that body; the sight being more and more impaired, together with a corresponding lessening of the ciliary injection as the disease extended back to the choroid. It might be said, on the contrary, that attending purulent cyclitis might be expected; tense chemosis, pain, etc., which were not present in this case. However, it is very evident from what we observe in this case that suppuration can go on to a considerable degree in eyeball without chemosis, pain, etc., and if such a condition could occur in the choroid or retina without chemosis, ciliary neuralgia, etc., why, supposing the suppurative disease to have had its origin in one of these situations, not in the ciliary body? Clinically we know but little of primary suppurative cyclitis. Where it follows plastic cyclitis, either idiopathic in its origin, or when due to injuries from foreign bodies, etc., its course is manifestly modified by the injury or the form of the inflammation it succeeds. Alt says:[1] "Raab at a recent date thought that in a case of purulent panophthalmitis described by him, the origin of the affection was to be found in the embolism of a ciliary blood-vessel. This, I think is, for obvious reasons, highly improbable, and has not been observed by others." Why for "obvious reasons" the author regards such a condition highly improbable is not clear to my mind. He presents no arguments to controvert such an hypothesis.

In the case I report the cornea and iris were unaffected. The lids were at all times somewhat swollen, but this was due to an extension of the general swollen condition of the face; no evidences of orbital cellulitis were at any time present.

The germ theory has recently entered conspicuously into discussions on the etiology of this form of eye disease (Heiberg, Litten, Hosch, Hirschberg, and others). Hirschberg writes:[2] "Whoever searches for emboli of the retinal vessels under the above-named circumstances, must remember that the embolic material consists of *bacteria*—of a mass which has been swept away from any given portion of the body into the veins, has passed the capillaries of the lungs, and then been driven onward by the arterial current into any given portion of the body. The embolic nature of the intra-ocular process was demonstrated twenty years ago by Virchow, lately confirmed by Roth, and the bacterial embolic material recognized by Heiberg and Litten. But little weight is to be attributed to a few negative conditions, chiefly in the later stages of the disease, because it is then so difficult to prove the presence o bacteria."

It seems to me we must accept such statements, *cum grano salis*, inasmuch as our opinions on this subject are not clearly settled. It is true that the presence of bacteria enables us to explain how certain results are obtained which we cannot otherwise easily account for; but the whole question still remains a debatable one. In Hosch's case[3] micrococci were discovered in the retina and vitreous body, but it is not clear to me that the *infarction was due to bacteria.* It is possible that the stasis in the circulation, due to the embolic plug, favored the development and multiplication of the germs. Horvath has demonstrated[4] that these germs do not multiply in rapidly moving fluids, and that when discovered in certain conditions in the blood they were found only in the capillaries and veins, and also in the lymphatics, where in a state of health the flow is about one-fifth slower than in the arteries. All the different forms of these germs, moreover, are smaller than the blood-corpuscles, and much more so than the lumen of the capillary blood-vessels, so that it is difficult to see how infarctions from their accumulation can take place.

Septic inflammation of the eye has been observed in variola, scarlet fever, cholera, rheumatism without heart complication, and after malarial poisoning, to the development of which latter conditions the bacteria in the blood is attributed. Landesberg records a case[5] where such a condition was established in what was believed to be intermittent fever, in evidence of which opinion the spleen was enlarged, the intermittent character of the disease was ob-

[1] It seems to be pretty conclusively settled that the vitreous humor, as well as the aqueous humor, is secreted by the ciliary body. At all events the choroid and iris can be excluded from having much to do in this process. Glaucoma: Its Causes, Symptoms, Pathology, and Treatment. Priestly Smith, London, 1879, p. 187; also Leber, Handbuch der Gesam. Augenheilk., ii., 1, 390, etc.

[1] Lectures on the Human Eye in its Normal and Pathological Conditions, New York, p. 108.

[2] Arch. of Ophthal., vol. ix., No. 4, p. 381.

[3] Archiv. für Ophthal., xxvi., 1, p. 177.

[4] L'Influence du repos et du movement sur le development des etres vivants. Paris, 1879.

[5] Centbl. für Augenheilk., iv., p. 344, and v., p. 61.

served, together with its rapid disappearance on the administration of quinine. The patient died some months later from what was supposed to be metastasis of the brain and lungs.

How important a *rôle* germs play in bringing about such conditions, with our knowledge of the subject, I think it might be fairly said, is uncertain. Magnin says,[1] concerning the influence of bacteria in putrefactions, fermentations, surgical lesions, contagious diseases, etc., that "notwithstanding the considerable numbers of labors of which the bacteria have been the object, in these different points of view it is not yet possible to define it in a certain manner."

181 East State Street.

Progress of Medical Science.

Syphilitic Azoospermism.—In the June number of the *St. Louis Courier of Medicine*, Dr. J. P. Bryson relates several cases of sterility in the male, resulting from syphilitic infection. The author points out that the agency of syphilis in the production of sterility in men, has been very generally overlooked, or else is only very briefly referred to. He accounts for this fact partly on the ground of the prevalent belief that, a man who is potent is not sterile, but mainly for the reason that patients are vastly more concerned about their copulative than about their procreative powers. The knowledge that the testes are not necessary to life, nor even to the maintenance of a perfect state of health, he believes to be perhaps responsible for the neglect on the part of investigators to study more closely the influence of various diseases in the production of azoospermism. In none of the cases described by Bryson had there even been noticed any enlargement of the testes, nor could any one of the patients remember that any pain had been felt. The pathological basis of syphilitic azoospermism is held to be an interstitial connective tissue process, which secondarily affects the epithelium of the seminiferous tubules. In the end, a true fibrous degeneration of the organ ensues. It should be remembered, however, that this is a theoretical inference devoid of actual substantiation by microscopic examination. According to the author azoospermism may be due to:

1. Congenital bilateral deficiency of the epididymis or vas deferens.
2. Congenital bilateral anorchidism.
3. Cryptorchidism.
4. Affections (diseases) of the testes.
5. Obliteration or obstruction of the epididymis or vasa deferentia.
6. To abnormal (diseased) conditions of the semen.

He concludes by remarking that, so long as there remains even a modicum of healthy epithelial structure in nervous connection with the centres, even though it is utterly incapable of forming zoosperms, there seems to be no danger of impotence, though sexual capacity may be materially impaired. The sperm forming power of these cells is not necessary to the existence of that influence which they have on the sexual nervous system and which so closely resembles that of the ganglion on the posterior roots of the spinal nerves. So azoospermatics are not sailing on so narrow a margin of potency as one would imagine at first blush. In all the cases recorded by Bryson, treatment was ineffectual in restoring the testes to a normal performance of function, and the prognosis of syphilitic azoospermism would, therefore, appear to be invariably unfavorable.

[1] The Bacteria: Sternberg's translation. Boston, 1880.

Effect of the Rheumatic Diathesis upon the Initial Lesion of Syphilis.—That the course of syphilis may be greatly influenced by any so-called diathesis of the patient, is well known to all careful observers. Dr. Lockwood (*British Med. Journal*, May 27, 1882) records a number of cases which would seem to show that rheumatism may very decidedly influence the course of the initial sore of syphilis.

The following is typical of a number of similar cases reported by him:

A patient, aged twenty-six years, came under Dr. Lockwood's care in September, 1879. He had what appeared to be an excoriation near the frænum. Ordinary applications had no effect upon it. By the end of September the sore was larger and considerably indurated; not inflamed or particularly ulcerated. The inguinal glands were indurated. About the beginning of October the character of the sore changed. It became inflamed, very painful, and excavated. There was a profuse, thin, and slightly sanguineous discharge. Small sloughs occasionally separated, and the ulceration extended until about a quarter of the glans penis was destroyed. The appearance of the disease at this time was quite characteristic. The sore was acutely inflamed and phagedænic. In November there was acute inflammation of the dorsal lymphatics of the penis, with roseola over the chest and belly. The treatment adopted locally, during the whole course of the disease, was the use of warm baths and the application of iodoform. Constitutionally, two and a half grains of blue pill were administered night and morning. The effect of mercury was to cause the sore to spread, and increase the pain. Iodide of potassium with tartrate of iron was given in increasing doses. Opium was administered to relieve the pain. Improvement was rapid and continuous, and the sore healed. Afterward, the patient had a slight tubercular syphilide and ulcerated throat. These were relieved by increased doses of iodide of potassium (thirty grains) three times a day, and calomel vapor baths (fifteen grains) every other night. About February, 1880, he discontinued the iodide of potassium, and took half a grain of green iodide of mercury each night for a few months. He is at present free from symptoms.

In this, as well as the other cases, there was a clear history of antecedent rheumatism, and the author thinks that, even if not positively convincing, they are at least eminently suggestive. He concludes that, in cases of syphilis, in which the initial lesion is inflamed and phagedænic, and in which there is a history of rheumatism, it is probable that iodides will be of service at an earlier stage than usual. Mercury should be administered with the greatest caution, if at all.

Diabetic Endocarditis.—M. Lecorché points out, in a communication to the Académie des Sciences, that the frequent occurrence of inflammation in the course of diabetes leaves no doubt of the tendency of this affection to produce in the persons who are attacked by it an inflammatory diathesis. The inflammations are not confined to the skin, the digestive canal, the kidneys, nor the lungs; they may implicate other organs. M. Lecorché recently described to the Academy of Medicine, as one of

the somewhat frequent complications of diabetes, atrophic cirrhosis of the liver. He now draws attention to endocarditis. Diabetic endocarditis, which he has observed on several occasions, appears to show itself more frequently in females than in males (in eight cases out of fourteen). He has not met with it otherwise than in the chronic condition, and only as a complication of subacute or chronic diabetes. It only appears at an advanced stage of the disease—two or three years, or even more, after its commencement. Its appearance seems to be favored less by the intensity of the glycosuria than by its long duration. It is localized at the level of the mitral orifice, and M. Lecorché has only seen it on one occasion situated at the level of the aortic orifice. It reveals its existence by a *bruit de souffle* with the first sound at the apex of the heart, and by irregularity and intermittence of the pulse. It is sometimes accompanied by atheromatous degeneration of the arteries (twice out of fourteen cases). It accelerates the progress of diabetes, and frequently brings on death, either by inducing a more or less generalized œdema, ascites, or by becoming complicated with acute hepatitis. It seems to be due to the irritation which the prolonged contact of blood, changed by the presence of sugar in excess, produces on the lining membrane of the heart.—*British Medical Journal.*

Effects of Smoking on the Heart.—Cases of intermittent pulse have often been observed, in which the cause was unquestionably the use of tobacco, the difficulty disappearing in almost every instance where the habit was abandoned. The *Sanitary News*, under the head of "Danger Signals," presents the following interesting facts on this subject:

"Some years ago M. Decaisne drew attention to the fact that tobacco-smoking often causes an intermittent pulse. Out of eighty-one great smokers examined, twenty-three presented an intermittent pulse, independent of any cardiac lesion. This intermittency disappeared when the habit of smoking was abandoned. He also studied the effects of smoking on children from nine to fifteen years of age, and found that it undoubtedly caused palpitation, intermittent pulse and chloroanæmia. The children, furthermore, became dull, lazy, and predisposed to alcoholic drinks. Recently he reported to the Société d'hygiene (*Gazette Obstétricale*) the results of his observations on the effects of smoking on women. Since 1865 he has met with and observed forty-three female smokers. Most of them suffered from disturbances of menstruation and digestion, and eight presented very marked intermittency of the pulse without any lesion of the heart. He gave detailed accounts of these eight cases, in which all treatment directed against the intermittency proved utterly useless, while the suppression of tobacco was invariably followed by improvement and very often by complete disappearance of the phenomenon."

Aural Vertigo.—In a paper read before the Philadelphia County Medical Society, Dr. C. H. Burnett presented the following conclusions on aural vertigo:

There are two sets of fibres in the auditory nerve, viz., the sensory and the motor.

The motor filaments are connected on one side with the cerebellum by means of the inferior peduncles, and on the other side with the nerve-filaments sent to the ampullæ of the semicircular canals.

Irritation of these ampullar nerves may be conveyed from either of the three parts of the auditory apparatus, or from the auditory nerve itself, in the mechanical form of pressure, and this irritation may be further conveyed to the cerebellum and cause vertigo; so that it logically follows that this reflex cerebellar phenomenon as produced by aural irritation should receive the general denomination of *aural vertigo*, and that Ménière's disease is only a form of aural vertigo. Hence the latter name, unless used after accurate diagnosis of a disease originating in the labyrinth—*i.e.*, in the semicircular canals—will create confusion. But it should be said, in justice to Ménière, that, so far as the writer knows, he has never claimed a general application of his name to all forms of aural vertigo. It has been so applied only by well-meaning but inaccurate diagnosticians.—*Philadelphia Med. Times*, June 3, 1882.

Nicotinic Amblyopia.—Dr. Miguel Segura, in an article published in *La Clinica de Málaga*, concludes as follows: The amblyopia of alcohol and that of nicotine have many points of resemblance, but also differential characteristics, which may be thus summarized. The pupil is dilated in alcoholic amblyopia, and contracted in the nicotinic form. The beginning of the former is sudden, almost instantaneous, the course of the latter slow and progressive.

In alcoholic amblyopia both eyes are equally affected, while in the nicotinic form one or both organs may be involved, generally, however, one later than the other, or unequally. In alcoholic amblyopia the patients see better at night, a bright light disturbs them, they complain of chromatic phenomena, and of disturbances due to spasms of the muscles of accommodation. Those suffering from nicotinic amblyopia, however, see better during the day, and do not observe the other phenomena named. In nicotinic amblyopia the basis of treatment is the enforcing of complete abstinence from tobacco.

Recovery is expedited by tonics, hypodermic injections of strychnine, and by caffeine; the last named increasing the activity of the circulation, overcomes the stupefying action of tobacco by thus exciting the nervous centres. Sulphate of quinine and bromide of potassium specially recommended by Italian ophthalmologists, have yielded brilliant results, especially in the mixed amblyopia of alcohol and tobacco.

The Value of Abnormal Respirations as a Sign of Incipient Pulmonary Tuberculosis. — M. Grancher, in a communication to the Société Médicale des Hôpitaux upon the above subject, concludes as follows: In view of the importance of arriving at the earliest possible diagnosis of tuberculosis, great value should be placed upon abnormal respirations. When they are limited to one apex, especially to the left, these abnormal respirations do not alone aid one in making a diagnosis, but are of themselves sufficient to establish it without any modification of sound, and without adventitious signs, crackling râles, etc. These abnormal respirations are, in the order of importance: rude and low-pitched inspiration, interrupted respiration (*respiration saccadée*), and feeble respiration. These conclusions are not applicable to patients who have previously suffered from general pleurisy, from pneumonia, or from any other grave disease of the lung or pleura. On the contrary, they are of the greatest value in young folks suspected, for some reason or other, to be subject to a tubercular process.—*La Tribune Médicale*, June 25, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, August 12, 1882.

HOW TO CONSULT.

At a recent dinner of prominent medical gentlemen in this city the conversation settled itself in a purely natural way upon the subject of the ethics of consultation. Many matters of personal experience were recited, illustrating almost every possible phase of relationship of attending and consulting physicians, and withal there was that general freedom in the interchange of opinion regarding mutual rights and obligations which is not uncommon on similar occasions of prandial association. It is quite possible that the discussion was flavored with more of seriousness than is customary at such times, for each seemed to feel that the topic was one of more than general interest, that it presented many sides for consideration, and was of a scope to compass the greatest interest of the entire profession. It is not our purpose to rehearse the doings of this interesting company in any detail, but merely to allude to some general principles which are quite reasonably based on many of the facts presented. At least, enough material was furnished on the occasion referred to to serve us in good stead as ready food for much reflection.

We are, perhaps, prepared now to present the divisions of the subject in our own way, and draw such conclusions as may seem legitimate from the premises. For the latter, we throw ourselves mostly upon the experiences of the little company of diners at the Union League.

In considering the obligations of all parties concerned in a consultation, we shall, for the sake of convenience, make three divisions of the subject: first, the rights of the attending physician, those of the consultant, and lastly and most important of all, those of the patient.

The rights of the attending physician are pretty well settled by common usage. It is generally understood that a consultant is called in to endorse, if possible, the treatment of the attending physician, and in every possible way to strengthen the latter in the confidence of the patient and his friends. This is a good rule, and generally is easily followed in the interests of all concerned. No man can be party to any consultation against his will. If he selects his own consultant he does so because he believes the man of his choice to be the one capable of giving advice; if he consents to meet another who may be named by the patient, he does so with a full knowledge of his privilege of objecting to such consultant for any reasonable cause. Hence the mere meeting of a man in consultation by a general practitioner, implies an understanding to look after each other's personal and professional interests. It is not difficult to understand why the general practitioner who agrees to meet a consultant, has a decided advantage in the way of protecting himself from criticism, which may have the slightest suspicion of an unfriendly turn. Unless some such guarantee were given to the family attendant, consultations would be few and far between, and when they were held, might not infrequently result in disgraceful scenes in the sick room. At least, the exhibition of trivial differences of opinion are guarded against, and every effort is made to keep alive that abiding faith in the good and long-trusted family attendant, which faith is always more than half the battle against the disease. This is as it should be, and the general line of conduct to such an end admits of no change for the better. The family physician honors the consultant by an implied confidence in his judgment, and the consultant is bound in turn to do everything in his power and with a perfectly unselfish spirit to reciprocate.

It is seldom that the family attendant is disposed to take any advantage of the situation. And this leads us to the consideration of the personal rights of the consultant as compared with those of the regular attendant. If the latter assumes too much, must the consultant, out of courtesy, yield? Certainly not. But the contrary is so often the case, every one knows.

The sentiment of the little company into whose confidence we admit our readers, was distinctly to the effect that the business of being called in merely to endorse another's practice, good or bad—and oftentimes the latter—was being carried in some quarters, too far. The consultant was in such cases a convenient figure-head, behind which the little mistakes of the family attendant were quietly hidden. If these mistakes were trivial in character, or merely founded on personal differences of opinion on unimportant points, and really worked no harm to the patient, there should be no concern one way or the other. The duty of the consultant was plainly on the side of his confrère. Should, however, a

radical opposition to each other's views exist, there was a conscientious reason why a statement to that effect should be made to the friends of the patient, and if necessary a third consulting party be chosen. Before the patient the opinions of each are entitled to an equal amount of respect, but between themselves the consultants may concede one to the other, according as either may have more extended experience or greater skill. Thus, it was declared to be absurd for a family practitioner to question the judgment of an ophthalmologist upon the propriety of operating for cataract in a given case, or to place himself on a par with an acknowledged expert in any particular department. And yet cases were cited in which the latter course was boldly taken by gentlemen who obviously knew not the responsibility they were assuming. It was hardly to be expected that the specialist under such circumstances would retire from the case without a free and courteous expression of difference of opinion.

Regarding the relations of consultants to patients, much was said by the diners in a semi-confidential and off-hand way. By some consultants it was said to be the practice of communicating with the physician in attendance only. So far as such might be in the light of a strictly medical consultation and the discussion of technical points connected therewith, it was eminently proper, but was thought to be unjust to the patient or his friends to deny either the right of a formally expressed opinion from the consultant. The patients pay for such an opinion, and consequently have a right to it. Otherwise patients could consider that consultations are, as a rule, a farce, and only benefited the doctor in attendance, who virtually had the thing his own way in any event. And this was really one reason why it was believed that consultations were falling into disrepute among many of the more cultivated classes. The important points to agree upon were those of diagnosis and prognosis, save in exceptional cases, requiring the exercise of special skill, as in operative procedure and the like. The details of treatment was generally left to the attending physician, who was, of course, willing to receive suggestions. Open discussions before the family upon technical points, or the offering of reasons for any slight difference of opinion between the consulting parties were always dangerous, giving the audience anything but the proper faith in medicine as a science. Patients who want opinions like to have them positive in character. They at least think that the given factors, patient, doctor, and treatment, are always constant in their relations, and that there are reasons almost mathematical why a correct diagnosis should be made, the proper treatment selected, and unerring prognosis given. The nearer we can approach this ideal by a distinct agreement on all the necessarily cardinal points, the more positive concerning them we can appear to be to the patient, the better for all concerned.

It had very properly grown into the fashion, at least in attendance upon the higher classes, for the consultant to deliver the opinion to the patient's friends, and in the presence of the family physician. Hardly a case could be imagined in which such a course was not proper. The family attendant obtains all the benefit possible in the consultation by private discussion in the adjoining room. If an agreement is arrived at, either as to the necessity of changing the treatment or not, it is a simple matter to say so afterward to the patient's friends, making the decision a joint transaction in which one party to it cannot in any event obtain undue credit over the other. The statement of general conclusions is sufficient, immediately after which the consultant should leave the patient with the latter's regular family attendant. When there is a radical difference of opinion, the fact can be stated in much the same manner, without in any way reflecting on the judgment of either party, or of the right of each one to his own convictions. Then there is nothing hidden, no reflections are cast on any one, the consultant conscientiously earns his fee, and the patient and his friends are satisfied. All satisfactorily done when the right men meet.

At this stage the conversation is more or less desultory; one gentleman cites a case in which a physician had treated a lady for enlarged inguinal gland, when the swelling was really due to a dislocation of the femur of the pubes. Bad case, that, but nearly equalled by other similar mistakes in diagnosis within the experience of those present.

"But how do you treat office patients who come for an opinion," is asked across the table. The answer summarizes itself from different points of view. If the physician comes with his patient, then a formal consultation is held; if the patient is sent by the physician the opinion is given to the latter under seal, but as is becoming the custom, when the sick one asks for an opinion on his own account, usually regarding the propriety of an operation, and reserves a right to choose from a multitude of councillors, he obtains what he pays for, nothing more and nothing less. And all agreed that these were the proper positions to take.

THE CARE OF EMIGRANTS.

A BILL has been favorably reported by the House Committee on Commerce, aiming to regulate the carriage of passengers by sea. It has been carefully drawn and is approved by the steamship companies. It contains provisions for the sanitary care of emigrants which may have some interest to the profession. Indeed it has been largely by the advice and at the urgent promptings of medical men that the

reforms proposed in this bill have at last taken definite shape.

The bill provides that one hundred cubic feet of space shall be allotted to each passenger on the main deck or first deck underneath, and one hundred and twenty cubic feet for those in the second deck below the main deck.

The height of the ceilings must be not less than six feet.

There must be only two tiers of berths, which are to be not less than six feet by two in the case of single berths. Only one person above the age of eight is allowed to sleep in a single berth. Children under one year are not counted, while two children between the age of one and eight years can be reckoned as one. Provisions are made also for the separation of the sexes.

There must be two ventilators for every fifty persons.

The water-closets must be numerous, viz., one for every one hundred males and two for every fifty females.

Directions are very explicit as regards the amount and the serving of the food. The equivalent of at least one and a half navy rations must be supplied to each person, and meals must be furnished regularly three times a day. Two apartments for use as hospitals are to be provided. These must have at least eighteen superficial feet for each fifty passengers. A qualified surgeon is to be in attendance. Periodical cleaning and disinfection, if necessary, is to be enforced. Prohibition is made against the carriage of dynamite or other dangerous compounds and also against the carriage of animals in a way or to an extent likely to discommode passengers.

Proper arrangements are made for the examination of the passengers by the health officer when the vessel enters port.

If the bill, thus carefully drawn, becomes a law, as it should do, we shall hear less of the horrors of emigrant ships now periodically published.

GERMAN WATER-CURES.

THE prominence of baths and mineral waters in German therapeutics is very noticeable. Large works, like Ziemssen's, are devoted to Balneology alone. This fact is due, in great part, certainly to the large number of medicinal springs to be found in that country as well as in Austria and Hungary. It has become very much the fashion for city people of the continent to go to some springs for the summer and there recuperate. The question, says a German author, presents itself every summer to the invalid and to those exhausted by winter's work or gayety, "to what bath shall I take my enlarged liver, my unhappy stomach, or my deranged nerves?"

Dr. Kämpf, in the *Badearzt*, attempts to answer this query, in part, and gives an entertaining sketch of some of the health resorts of Austro-Hungary.

Carlsbad is placed at the head of the list. Liver troubles, gravel, obesity, diabetes, catarrhs of all kinds, will, we are assured, disappear entirely, or to a great extent, under the beneficent influence of its waters. Marienbad has a very similar reputation.

Franzenbad is a curious place and very different from the former. It is visited almost entirely by women. Those who are suffering from the effects of child-birth, who are worn out, feeble, and anæmic, go to Franzenbad and drink its chalybeate waters.

The number of hot sulphur baths, which are reputed valuable for skin diseases, rheumatism, and gout, is quite large. It includes Trenezin-Teplitz, Pystian, Warasdin, Gastein, the Brennerbad, and Neuhaus, which latter place has also a reputation for nervous diseases. Most of the above places are frequented chiefly by invalids, and are rather dolorous spots for those who are not very ill and wish amusement as well as medicated water. For this latter class such places as Baden-Baden, Wiesbaden, Hamburg, Giesshübler, etc., are especially adapted. The waters of the last named place are recommended as among the most pleasant to the taste of all.

Patients with chronic skin diseases choose either the indifferent thermal or the sulphur baths. Dr. Kämpf asserts that, in his opinion, the most efficient waters for these diseases are those of the Bad Lenk in Switzerland. He speaks in particular of its effects upon psoriasis.

Scrofulous patients and those suffering from venereal disease go to Hall, Luhatschowitz, Lipik, etc. Also to Schroth's Hunger or Breadcure in Lindewiese. This Schroth was originally an ignorant peasant, who conceived a theory of disease and based upon it a system of treatment which made him widely famous. He deprived his patients of food almost entirely, giving them only an occasional piece of bread and drink of wine. They were sweated and purged at the same time. When he had sufficiently reduced them, and the "materia peccans" was driven out, he fed them freely again. His results were very brilliant, especially in some bad forms of syphilis. Priessnitz, "the discoverer" of the cold-water treatment, for a long time carried on a rival establishment at Gräfenburg.

The Tyrol has as many as fifty-five different medicinal springs. None of them are much developed, however. There is an average of half a dozen patients living near each. One of them, at Roncegno, contains a little arsenic.

Some of the mineral waters are reported to have certain fecund properties; for example, the Bubenquelle at Ems. How much they deserve the reputation is not said. But sterile women go there, and are satisfied.

The above somewhat random facts may serve to remind American physicians that we have mineral waters also which are probably quite as good as those of Germany. Their actual medicinal value, however, has not been studied carefully and impartially to any extent. But we might profitably utilize our "water-cures" to a greater extent than is now done.

Reviews and Notices of Books.

MEDICAL AND SURGICAL REPORTS OF THE CITY HOSPITAL OF THE CITY OF BOSTON. Third Series. Edited by DAVID W. CHEEVER, M.D., OLIVER F. WADSWORTH, M.D., and A. L. MASON, M.D. 8vo, pp. 390. Boston, 1882.

THE aim of the editors of this volume has been to present such a selection of hospital cases as may be most useful for comparison and reference. They have succeeded so well in their work as to make it a model of its sort, and leave hardly anything further to be desired. The general plan followed has been, as formerly, the contribution of papers on medical and surgical subjects by members of the staff, giving, by way of summary of certain groups of cases, the general practice of the hospital. Such papers have a special value in bringing out the salient points of a large number of cases and utilizing experience in the treatment of disease on a large scale. It is by such means that general principles are evolved and the merits of different methods of managing disease established. The articles contributed are, without exception, well written and to the point, contain material of great practical interest, and give the volume as a whole a special value for the studious and advancing practitioner.

Dr. Samuel G. Webber opens the volume with a painstaking study of the pathological histology of the spinal cord.

Then follow notes of typhoid fever from a series of 1,036 cases by C. Ellery Stedman, M.D. This article partly continues the subject treated by Dr. J. B. Upham in the first volume of these reports. The present record comprises the cases entered on the hospital books for the ten years preceding 1881, and is a most careful study of the history, causes, and treatment, more especially of 192 cases under the reporter's personal observation. The detail of cases is in the shape of corroborative evidence of what is already known concerning the course, treatment, and average results of the disease, and is presented in a terse, practical, and straightforward manner The plan of treatment is mainly supporting, with the incidental treatment of complications. Milk diet is advised in preference to that of beef-tea, as the latter is apt to produce diarrhœa. Above all, the patient is not allowed to contribute to tissue waste by any exertion whatsoever. Thus the author rather significantly and naïvely puts it by saying that diarrhœa requires first the bed-pan. For the reduction of temperature, reliance is very properly placed upon cold baths, sponging, and quinine in antipyretic doses. We are unable to follow the author in his detail of treatment for occasional symptoms and complicating conditions; suffice it to say that it accords with that generally adopted by authorities and mainly practised by the more experienced and leading practitioners.

A rather curious and interesting feature of this volume is a synopsis of fifty medico-legal cases by F. W. Draper, M.D., wherein several examples of death from criminal abortion, from drowning, from accidental suffocation, suicidal wounds, and other modes of sudden death are carefully analyzed.

The surgical cases by Dr. David W. Cheever are interesting and important, and mostly comprise operations about the head and neck. Notably among these may be mentioned an interesting report of a removal of a cancerous tonsil by external incision, and three cases of extirpation of naso-pharyngeal polypi after Cheever's method.

A synopsis of gynecological practice, by Dr. G. H. Lyman, extends over a period of five years of practice in the hospital, but does not present anything more than the ordinary run of cases; neither are any new methods for treating particular affections advocated. Dr. Robert T. Eades' remarks on high-pressure education and its effects are full of suggestions, and deserve careful attention.

The cases of diphtheria occurring in the winters of 1880 and 1881, in the service of Dr. Hall Curtis, are well reported, but, as might be expected, only tell the old story of a given ratio of mortality, no matter what the treatment.

Dr. O. F. Wadsworth contributes an able chapter on optico-ciliary neurotomy, with illustrative cases; and two interesting cases of uterine fibroid are related by Dr. O. W. Doe.

The surgical abstract by Dr. Geo. W. Gay covers a great deal of ground, and includes a summary of the usual cases for operation which present themselves in the hospital ward. Tumors, mostly malignant, are in good proportion. They return as usual after operation, but they are excised and cauterized, nevertheless, in order at least to prolong life and make the patient comparatively comfortable between the recurring periods. We have the typical cases of strangulated hernia, head injuries by gun-shot and other means, plastic operations, etc. The hospital surgeon, by the perusal of these well-observed cases, is enabled to live over many thrilling personal experiences.

Dr. A. L. Mason next gives an analysis of 200 cases of primary pleurisy treated in the hospital during the past ten years. This is made with great care and skill, presenting, in a very condensed and readable form, all the different salient features of the disease. Dr. W. P. Bolles presents some new surgical apparatus, notably a new form of fracture-box and splint combined. It is pretty, and doubtless serves its purpose well, but is rather too complicated to successfully bid for extensive use. His remarks on the tin finger-splints are thoroughly practical.

Dr. E. Wigglesworth and E. W. Cushing give some practical points on the diagnosis and treatment of deep syphilitic ulcerations of the throat, and close the collection. And altogether the volume is one of the most interesting and practical of its kind that we have seen for a long time. Why cannot other hospitals do likewise?

TRANSACTIONS OF THE AMERICAN GYNECOLOGICAL SOCIETY FOR THE YEAR 1881. Vol. VI., 8vo, pp. 542. Philadelphia, Pa.: H. C. Lea's Son & Co.

THE present volume (VI.) of "Transactions of the American Gynecological Society for 1881," while not materially differing in arrangement from the original

plan, is as usual enriched with many interesting essays, presenting in permanent form much original research in the various fields of gynecology not usually embodied in other and more general works. The eminence of the authors affords conclusive evidence of the character of the book, and necessarily adds force to the opinions expressed. Both on this account, and the intrinsic worth which it possesses as a valuable addition to so important a branch of medical study, this volume will doubtless command the same wide attention received by its predecessors.

It comprises twenty essays by the following distinguished contributors: Samuel C. Busey, M.D.; Henry J. Garrigues, M.D.; G. H. Lyman, M.D.; Nathan Bozeman, M.D.; E. Van de Warker, M.D.; Isaac E. Taylor, M.D.; William Goodell, M.D.; Henry F. Campbell, M.D.; T. Gaillard Thomas, M.D.; Thaddeus A. Reamy, M.D.; Albert H. Smith, M.D.; A. D. Sinclair, M.D.; J. W. Underhill, M.D.; Edward W. Jenks, M.D., LL.D.; W. M. Polk, M.D.; Walter R. Gillette, M.D.; C. C. Lee, M.D.; Frank P. Foster, M.D.; E. W. Sawyer, M.D., and B. B. Browne, M.D.

Dr. Thomas' paper on "Expansion of the Bladder over the Surface of Abdominal Tumors and its Attachment to them or to the Abdominal Walls as a Complication of Laparotomy," is especially worthy of notice. The complication is of course a rare one. He reports but seven cases of this character, all fatal, and proceeds with a short history of each, concluding the paper with an account of one recently occurring in his own practice, upon which he operated with success. In his case, which is probably a typical one, there was an enormously hypertrophied bladder spread out over the tumor, extending laterally down into the lumbar regions, and upward to midway between the umbilicus and ensiform cartilage, with extensive vesical adhesions. One very important and practical bearing impressed is the care with which entrance into the abdomen should be effected. The possible diagnosis and management of the complication are then discussed, closing with the views of the author, concerning treatment of the condition.

"Exploratory Puncture of the Abdomen" is the subject of a learned contribution by Dr. Garrigues. As Dr. J. Marion Sims justly remarks, "in importance it is second to none."

Dr. Busey calls attention to a class of cases characterized by pain and tenderness diffused over the abdominal area following upon the introduction of a tent, childbirth, and not infrequently injections, and which he designates by the title of "Acute Diffuse Hyperæsthesia of the Peritoneum." The paper is an interesting one, and many novel points connected with the subject are carefully considered. Much interesting discussion follows, with an instructive analysis of the subject by Dr. Noeggerath.

Dr. Lyman, on "Pelvic Effusion Resulting in Abscess," has presented a paper of great practical value, together with an epitome of forty-one cases which have occurred under his observation at the Boston City Hospital. The attention of the profession is especially directed to the frequency of their occurrence, the importance of their early recognition, and to the propriety of an early operative procedure.

In short, the essays throughout are all of them of an excellence and character which reflects most creditably the depth of thought and experience of the contributars. It is to be regretted that space does not permit further mention in detail of other and equally valuable productions. There are a few plates introduced throughout the work. To it there is also appended an index of the gynecological and obstetric literature of all countries for the year 1880. The volume is, as usual, elegantly printed on fine toned paper, and handsomely bound in cloth.

THE EXPERIMENTAL METHOD IN MEDICAL SCIENCE. Second Course of the Cartwright Lectures of the Alumni Association, College of Physicians and Surgeons, New York. Delivered January 24, 31, and February 7. 1882, by JOHN C. DALTON, M.D. New York: G. P. Putnam's Sons, 1882.

THE above lectures have appeared in substance in THE RECORD, and our readers are familiar with their character and merits. They furnish an admirable *résumé* of the history of the development of the experimental method in science.

THE VEST-POCKET ANATOMIST (founded upon "Gray"), by C. HENRY LEONARD, A.M., M.D. Eleventh Revised Edition. Detroit: Illustrated Medical Journal Co., 1882.

THIS is an unusually good epitome of anatomical facts.

ELECTRICITY IN SURGERY. By JOHN BUTLER, M.D. pp. 125. Boericke & Tafel, 1882.

PRECISION in details on the art rather than the science of operation is the subject of this volume, accordingly we find, under forty separate headings, as many surgical procedures separately and concisely described.

The author regrets the absence of definite dosage in the electro-therapy of the day, and in many instances prescribes his current strength in millimetres to be determined by a galvanometer, and to be controlled by a rheostat. That such accuracy is to be desired is unquestioned; why it is not possible, with similar modifications, for age, sex, and condition which other Materiæ Medicæ require, its objectors do not clearly explain; to have attempted the practice appears to us a step in advance.

The directions are throughout those of a practical worker in the field, and suggest a delicately skilled hand. Of especial interest are the mildness of the surface applications and the extent of treatment the author proposes to accomplish "without pain," in which category his own excellent operation for the division of stricture occupies a prominent place.

While it does not supply the want of a more generalized treatise, this handy little book cannot fail to furnish very valuable hints regarding the management of the current and regarding many ingenious contrivances for their application.

THE PSYCHOLOGY OF THE SALEM WITCHCRAFT EXCITEMENT OF 1692, and its practical application to our own time. By GEORGE M. BEARD, A.M., M.D. 12mo, pp. 112. New York: G. P. Putnam's Sons, 1882.

DR. BEARD is always an entertaining writer. The subject and author are well adapted to each other, and the result is a scientific romance full of interest. The burden of the story is to prove that the hanging of Guiteau, who is adjudged by the author as utterly irresponsible, is on a par with the execution of the so-called witches at Salem; that both procedures were alike the results of ignorance on the part of so-called experts, and prejudice on the part of the public. The theory of Guiteau's insanity is ably defended, and the action of the Government concerning the assassin severely criticised. The pictures are admirably drawn, and the lights and shadows are thrown in with a master hand.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 24, 1882.

DR. E. C. SEGUIN, PRESIDENT, IN THE CHAIR.

THROMBOSIS OF THE UTERINE VEINS.

DR. HEINEMAN presented a specimen, with the following history:

Catharine S——, aged thirty; Ireland; married, housework; a pale woman; pregnant nine months, was delivered of a living male child at the Roosevelt Hospital, May 11, 1882. May 13th, her temperature was 100.8° F. The next day she became delirious, which later disappeared and returned. She had tympanitis, no abdominal tenderness, and finally died unconscious, May 24, 1882.

Her temperature was 104.4° F., her pulse 148°, her respiration 48° on the 17th, and varied subsequently between 102° and 105.2° F., 132° and 160°, 44° and 68°.

On *autopsy*, the heart, stomach, and intestines were found normal. Lungs, slight bronchitis. A small infarction in right lower lobe, surface of lung about infarction coated with recent purulent fibrin.

Liver congested. Spleen soft. Kidneys normal size, capsule not adherent, cortex and surface pale and mottled—parenchymatous nephritis.

Uterus, about natural size for parturient uterus—it presented no lacerations and no portions of retained placenta. Mucus lining of fundus coated with puriform fluid, and the lower portion of the body down to the os internum appeared coated as if by fibrin. Uterine veins all full of thrombi and in the ovarian vein of the right side. Within the broad ligament there was a large firm thrombus distending the vein. The peritoneal surface of the right broad ligament was coated by a little recent fibrin.

ARTHRITIS AND NECROSIS OF RIBS FROM A STRAIN FOLLOWED BY ABSCESS RUPTURING INTO PLEURAL SAC.

DR. HEINEMAN also presented specimens, with history as follows:

Alexander R——, aged forty-four; Scotland; single; stonecutter, was admitted to the Roosevelt Hospital, April 14, 1882. Five years previous to his admission, he strained his right arm and shoulder severely. Four months ago a small swelling appeared just at the lower border of the scapula. This has increased in size and now is sufficiently large to prevent patient's standing up by reason of the muscular tension.

The abscess was opened and evacuated, and washed out with carbolic acid daily.

On May 7th, temperature rose to 102° F. On May 11th, physical signs of trouble in the right chest were recognized, and on May 14, 1882, he died suddenly.

On *autopsy*, the liver, spleen, stomach, and intestines were found normal.

Heart.—Purulent serum in pericardial sac. Surface of heart thinly coated by a little purulent serum. Size and valves normal.

Kidneys.—Chronic diffuse nephritis.

Lungs.—Pleural cavity of right side two-thirds full of purulent serum, right lung covered with purulent membrane and adherent to chest-walls in places; lung compressed and contained a single large infarction—lung-tissue œdematous. Left lung normal except for old adhesions.

Ribs.—Over the neck of the fourth rib there was an irregular opening in the costal pleura which connected with an abscess cavity over the head of the rib posteriorly. The articular ends of the head of the fourth and fifth ribs were eroded, the adjacent lamina of the dorsal vertebræ were necrosed to some extent, and over the neck of the fifth rib, just beneath the pleural surface, a collection of pus, which was nearly ready to burst, was found. Over the posterior portion of the ribs a large abscess cavity communicated with the chest through the opening referred to.

DR. WYETH remarked that the abscess, in the case related by himself at the former meeting, was in danger of opening into the pleural cavity at any moment, and this danger was guarded against by at once incising it. As the patient was yet living, the exact pathological changes were unknown.

DR. N. BOZEMAN presented two specimens:

1, CYSTOMA OF THE OVARY; 2, OVARIAN PAPYLOMA.

The patient was an unmarried woman, thirty years of age, who presented herself to him in February last with an ovarian tumor. Her health was good until four years ago, when this tumor began to develop, although its true nature was not recognized by her physicians until later. There was a fulness in the posterior cul-de-sac, the nature of which was not fully understood, and it was feared that it would render the case less favorable for operation. An attempt was made to improve her general health before proceeding with the operation. On the first occasion she took ether badly, and the operation was postponed until to-day. The cyst had pretty extensive attachments, particularly to the omentum. It contained several smaller cysts. On inverting the tumor, at its lower portion was a papillomatous growth, with cauliflower excrescences. The right ovary was impacted in Douglas' cul-de-sac. Its pedicle was twisted upon itself three or four times, which made it difficult of extraction. It presented a beautiful specimen of small-sized multilocular cyst, the smaller ones being about five in number. By this specimen one could readily understand a certain class of cases of ovarian cyst mentioned years ago by Dr. Atlee. After attaining considerable size the cyst is punctured, and collapses completely. It refills, and the operation may be repeated a number of times, but later without complete collapse. This is due to the gradual growth of the smaller cysts, the fluid of which has no communication with that of the larger one. There was albumen in the urine, and two weeks before the operation her family physician said he discovered granular casts, but other microscopists were unable to detect any.

DR. HOWE remarked that if there were granular casts and albumen in the urine the patient would die. He had never seen a patient with Bright's disease of the kidney recover from a capital operation. It was to be remembered, however, that the presence of albumen alone in the urine was by no means a positive sign of disease of the kidneys, and care, therefore, should be exercised not to make a false diagnosis of renal disease.

DR. L. H. SAYRE remarked that a number of years ago his father exsected the hip-joint of a boy upon whom another surgeon had refused to operate, because of the presence of granular and hyaline casts

in the urine, indicating Bright's disease. The patient recovered from the operation entirely, but died nine months afterward from acute nephritis.

Dr. Gibney remarked that there were cases on record of amputation at the hip or thigh, the patient having amyloid kidney and liver, and recovery from the operation being perfect.

Dr. R. Tauszky remarked that if there were amyloid degeneration of the liver and kidney, uræmic symptoms would almost inevitably develop within a year or two, and the patient die. He was satisfied that an error of diagnosis respecting kidney disease was sometimes made in these cases by mistaking other material, as linen, etc., for casts in the urine. It required a good microscopist to distinguish granular casts in the urine. In certain affections, as scarlatina, casts and albumen in the urine might indicate disease of only a part of the kidney, which might be recovered from.

Dr. Gibney remarked that amyloid degeneration of the liver and kidney was recognized in a boy upon whom it was proposed to operate for amputation of the leg, in Bellevue Hospital, but the operation was desisted from on account of the renal disease. There was albuminuria, and casts had been recognized by two or more able microscopists. The operation was afterward done at the Presbyterian Hospital, and the patient was now well, more than a year since the operation. In that case the liver was recognized as greatly enlarged.

Dr. Howe remarked that it was well known disease of the bones was one of the common causes of amyloid degeneration of the kidneys, etc., and it was not impossible that, after removing the cause in this case by amputation, that it cured the affection of the viscera. If such patients recovered after capital operations, they were exceptions to the rule mentioned, viz., that patients with renal disease almost certainly die after capital operations.

MULTIPLE CEREBRO-SPINAL SCLEROSIS.

Dr. Kinnicutt presented the specimen at the request of Dr. Satterthwaite. It was obtained from the body of a woman who died in his service at St. Luke's Hospital, and the history of the case had been furnished by the house physician, Dr. W. C. Campbell.

Clementia F——; thirty years of age; single; German; was admitted April 27, 1882. When admitted her memory was so impaired that it was almost impossible to obtain a connected history, but as near as could be learned, she was well until two years ago, when she began to have attacks resembling epilepsy. Six years ago she began to have convulsive twitching of the right lower extremity when any attempt was made to walk, and this soon extended to the right arm, and completely incapacitated her for working.

On admission patient was well nourished. Complexion good. No œdema. Complained of no pain. No feeling of cincture and no disturbances of sensation. Her urine dribbled continually—not incontinence, but overflow, catheterization giving relief. Bowels moved involuntarily. There were marked ataxic movements of extremities. No loss of power; marked impairment of co-ordinating power; marked tremor upon voluntary motion, especially of the right extremities, which increased with increase of mental effort; is rhythmical, so great that patient cannot walk. Does not involve the head, and does not exist during rest. Slow, jerky manner of talking, as in "scanning." Tendon reflex normal; marked mental weakness; no irritability of temper; meaningless smile. Pupils react well—right more readily than the left. Diagnosis of multiple cerebro-spinal sclerosis was made. The patient gradually grew weaker; had constant vomiting; no control of sphincters. Mental habitude became more intense daily, till gradually (May 19th) patient ceased to notice anything about her; could be roused, however, and breathing was not stertorous. Urine contained blood and pus.

May 22d.—Articulation very indistinct; deglutition difficult; complexion dusky; listless expression of face; eyes sunken and lids half open. Can still be roused to understand what is said; respiration slow and quiet; tremor of right extremities remains. Apparent paresis of left arm and leg. Reflex skin irritation of lower limbs retained. Heart-sounds normal. Temperature, 99° F. During the night she continued growing weaker. It became impossible to rouse her. Pulse became weaker; respiration, 36; temperature, 102° F. (axilla), and at 5 A.M. patient died. No marked impairment of respiration until just before death.

The diagnosis of multiple cerebro-spinal sclerosis was verified at the post-mortem examination, and constituted the only abnormal condition present.

The President remarked that the affection was not an uncommon one, but we seldom had opportunity to verify the diagnosis by a post-mortem examination. He knew of but one case in this country the pathological anatomy of which was published in connection with the history. The diagnosis in that case had been made during life by Dr. Clymer, and the record was made by Dr. Vanderveer and himself. In reply to a question by Dr. Parker, Jr., he said the original cause of the affection was unknown.

He would add that in some cases where the cerebral symptoms were not marked, as by the presence of nystagmus, dementia, and hallucinations, there appeared to be some difficulty in differentiating between locomotor ataxia and sclerosis in patches, but the condition of the reflexes was, in such cases, diagnostic. In sclerosis of the posterior columns of the cord there was entire absence of the reflexes, while in disseminated sclerosis it was, according to his observation, always present, and usually exaggerated. This was the only differentiating symptom in a certain case which occurred at St. Luke's Hospital.

REPORT OF THE COMMITTEE ON MICROSCOPY.

Dr. W. R. Birdsall reported that Dr. Messenger's specimen—a tumor of the mammary gland—proved to be a carcinoma of the scirrhus variety, consisting of groups of cells, containing considerable protoplasm, and of the type of the neighboring glandular elements, imbedded in alveoli formed by dense bands of connective tissue, the latter predominating, thus accounting for the extreme hardness of the spherical scirrhus mass about an inch in diameter.

Dr. Newman's tumor, removed from the palmar surface of the hand, consisted of true bone, of the cancellous variety.

Dr. L. H. Sayre presented a specimen of

BONE FROM A GUN-SHOT WOUND OF THE FOREARM.

Nearly all the flexor muscles of the right forearm were blown away by the injury. A few days later erysipelas developed. He saw the patient about three weeks later. The ulna was exposed to a dis-

tance of several inches, and the olecranon was also exposed to view. Three or four bony processes projected from the ulna near the wrist joint. An incision was made connecting the openings on the ulna and at the olecranon, when a piece of bone was removed without difficulty. The sinuses below were then divided, a number of pieces of bone were removed, a superficial caries of the radius was scraped, the wound was dressed with oakum. No unfavorable symptom developed, and the patient was now able to be out of doors. The temperature had not risen above 100° F.

CICATRICIAL TISSUE FROM A BURN.

DR. SAYRE also presented a specimen of the above, which was removed from a boy eight years of age, who three years ago sustained a burn covering about two-thirds of the anterior surface of the left thigh and the entire abdomen. The burn originated in the ignition of some phosphorus in his pocket. The wound was about eighteen months in cicatrizing, and soon afterward began to contract in a line from the pubis to the anterior superior spine of the ilium. At the time he saw the patient the contracture had so increased that the thigh was flexed upon the abdomen and abducted, the scrotum was involved, and the penis was drawn to the left side. A band of cicatricial tissue extended from about two inches to the right of the symphysis pubis almost to the anterior superior spine of the left ilium, being about the width of the thumb, and underneath this a similar band. The fascia was not involved. The above bands were dissected out so as to allow of extension of the thigh, and the denuded surface left bare, as it was impossible to do a plastic operation on account of the extent of cicatricial tissue, the limb was retained in the extended position to prevent recontraction. The case was doing well.

DR. RUDOLPH TAUSZKY presented

THE LARYNX, TRACHEA, AND LUNGS, ILLUSTRATIVE OF MEMBRANOUS CROUP.

The patient was a child two years of age, who died of croup of the larynx, trachea, and also extending down into the bronchi of the second division. Tracheotomy had been performed by a surgeon of this city, after dyspnœa had become so great that nothing else would give relief. The child died twenty-four hours later. Dr. Tauszky presented the specimen for two reasons: First, that it demonstrated the difference between croupous and diphtheritic exudation. Here the exudative deposit had fallen off in part of itself, and could easily be wiped off, leaving no ulcerative surface whatever. In the case of diphtheria, however, the exudative deposit could at no time, nor anywhere—from the tonsils, vagina, rectum, or other mucous membrane—be removed without leaving an ulcerative, raw surface. He regarded this distinction between the nature of the two diseases as very important, especially with regard to treatment, and to impress this importance constituted his second reason for presenting the specimen. Recognizing this distinction, it was proper in the treatment of croup to give emetics so as to remove the comparatively loose exudation. Such treatment would be entirely improper in the case of diphtheria, where it would have no effect in removing the deposit, and where a stimulating plan of treatment is indicated even from the beginning. Carbolic acid or salicylic acid should be employed locally as disinfectants, which was not at all necessary in cases of so-called croupous exudation. The distinction between the two affections is well marked otherwise clinically. He had never seen a case of diphtheria in which there was not some enlargement of the lymphatics of the neck; the pulse is weak from the first, and the temperature higher than in croup. A difference between the two affections was becoming more commonly recognized, although there were yet many physicians of high authority who consider them as one.

DR. VAN SANTVOORD said he attended a case of diphtheria this winter in which the pulse did not rise above 80 or 90 per minute until after five days from its commencement. The patient died. There was close attachment of the diphtheritic membrane to the larynx, but lower down it was less difficult to remove.

DR. J. G. PETERS remarked that he had attended a large number of cases of diphtheria where the deposit existed upon the pharynx and tonsils, but in which there was no enlargement of the glands of the neck. In some cases, however, the glandular swelling is very great.

ANEURISM OF THE ASCENDING PORTION OF THE ARCH OF THE AORTA.

DR. WYETH presented a specimen which was removed from a woman on whom he had made the diagnosis of aneurism of the arch of the aorta, at the junction of the ascending and transverse segments, and for its relief had tied the carotid. Before the operation the tumor bulged out beyond the level of the chest at the second intercostal space, but within two weeks after the application of the ligature it had appreciably decreased, and soon afterward was not visible beyond the surface of the chest. The patient died within a year of an intercurrent disease, and at the autopsy his diagnosis was verified. This treatment had been pursued in but five similar cases before, in one by himself. The case also illustrated the safety of the broad ligature. He was unable, satisfactorily, to explain why ligating the carotid should have caused the pain to cease and the tumor to decrease in size, although it was well known to do so in such cases.

DR. W. R. BIRDSALL presented gross and microscopical specimens of

SARCOMA OF THE BRAIN,

in which were found seven distinct neoplasms, ranging from the size of a pea to that of a walnut. The small, round cell or glio-sarcoma type predominated; great variations, however, existed. In portions were found that decided pigmentation of cells characteristic of melano-sarcoma; in others the type of the angio-sarcoma was particularly prominent, in some parts appearing like a series of channels without the definite walls of blood-vessels, producing an extremely vascular condition of the tumor, requiring careful manipulation to prevent extravasation of blood; still other portions of the growth presented a myxo-sarcomatous appearance, also large cells containing daughter cells, presenting a resemblance to the giant cell sarcoma. The spindle cell and fibrin elements were scanty. The most compact portions appeared around the blood-vessels. The margins of the growths were pretty well defined, but not strictly encapsuled, and neighboring parts of the gray and white matter presented a richer development of neuralgia cells than normal. Remarks were made on the effects of their growth on the central functions, and the relation of the facts to the "localization theories."

THE PRESIDENT remarked that a few years ago it was largely believed that tumors of the brain always caused neuro-retinitis or choked disc. This case was one among several which he had seen, in which the ophthalmoscope failed to give corroborative evidence of the brain-lesion.

The Society went into executive session.

MATERIA MEDICA SOCIETY.

Stated Meeting, Thursday, May 25, 1882.

DAVID WEBSTER, M.D., CHAIRMAN PRO TEM.

BEFORE the Society proceeded to the order of the evening, DR. PIFFARD made a few remarks. He stated that he had been asked by a pharmacist to inspect a package of viola tricolor received from a wholesale druggist. Finding in it much extraneous matter, he caused this to be separated and referred it to Dr. Laurence Johnson for examination. Dr. Johnson kindly sent him the following report:

"First and foremost the material consists largely of stubble, *i.e.*, what was left in a field of grain after gathering the crop. This crop was evidently rye, as I find heads of that cereal present. Grass stems and roots are also abundant, and also some flowering stems of the same. Numerous flower-heads of at least two different species of composite plants were also found, and numbers of leaves which could not be identified. One stem of equisetum—mare's tail—pine shavings, twigs, and bark, a few lichens, a shaving of some unknown wood, cut by an auger, a fragment of a tamarind pod with two seeds, an assortment of hempen strings, a plum-stone, a trousers-button, and a specimen of hen-dung are also among the miscellanies found in your precious package."

Dr. Piffard stated that a good fluid extract of this drug could be obtained from Messrs. Caswell, Hazard & Co., of New York.

INDIGENOUS REMEDIES.

The paper of the evening, entitled "Indigenous Remedies," was then read by its author, DR. JOHNSON, who supplemented it by exhibiting a variety of fresh medicinal plants gathered at Woodside, Long Island, a locality exceptionally rich in a number of species. Among the specimens shown were skunk's cabbage, the sambucus or common elder, the geranium maculatum, or spotted geranium, sassafras, the wild cherry or prunus virginianus, blood-root, the Indian turnip, Beth-root, leaves of the tulip-tree, flowers of the flowering dogwood, a branch of another species of cornus, a branch of the viburnum (very common in this vicinity), and several other plants.

He noticed that the reader of the paper had made no mention of the fucus vesiculosus and fucus nodosus.

DR. JOHNSON stated that the cryptogams, fucus vesiculosus, and nodosus were very common and abundantly found in the harbor between high and low water mark. He omitted to mention them because he did not consider their value established.

In speaking of the order ranunculacea, the reader, DR. PIFFARD said, had passed over the pulsatilla nuttalliana, although he referred to its European congener. Viburnum prunifolium and viburnum opulus were useful drugs, the former as an anti-abortive, the latter as an anti-dysmenorrhœic. The paper ought to stimulate the members to examine with more care and interest the varied medicinal plants met with in their walks and rambles in the country. Much useful knowledge might be gained in this way. If country physicians would make their own preparations from the flora surrounding them, instead of relying upon the concoctions of the druggist, they would often obtain much better results from their remedies.

DR. MORROW thought the topic under discussion was one of great interest, although the subject had not attracted the attention it merited on the part of the regular profession. Much of our indigenous materia medica, he thought, had been developed by irregular physicians. In regard to the conclusions of the author that we possessed few indigenous remedies of decided power, he suggested that perhaps they had not been investigated in a sufficiently thorough manner. Twenty-five or thirty years ago probably fifty per cent. of the remedies now in active use were comparatively unknown. Some of the most valuable remedies the modern physician possesses were scarcely used years ago. If proper attention were given to the matter, a great many plants now regarded as of no therapeutical value would be found to possess active qualities. There was one objection to Dr. Piffard's recommendation in regard to the country physician preparing his own medicines, it was that medicinal plants varied much in their active therapeutical properties according to the season of the year in which they were gathered, to conditions of climate and soil, and the way in which the preparation was made. Many unreliable preparations would result if every physician were his own pharmacist. Dr. Morrow thought that the therapeutist could obtain more positive and direct action and would be more apt to arrive at specific medication by the use of vegetable remedies than by employing the inorganic.

DR. SEXTON stated that since listening to Dr. Johnson's paper and the remarks made upon it, it had occurred to him that he had in his library a journal, edited by Dr. Drake, of the Mississippi Valley, in 1827. The Society, on inspecting the book, would probably be surprised to find how much study was given to indigenous plants at that time.

Dr. Sexton also remarked that some two or three years ago his attention was drawn to the marked effect on the ear of chenopodium anthelminticum. Several cases he published in the *American Journal of Otology* for 1880. Since that time he had used wormseed quite extensively in practice, especially at the New York Eye and Ear Infirmary, where a great variety of cases suitable for treatment presented itself. The effects of the drug upon the healthy person were detailed in the paper referred to. Dr. Sexton selected several cases of acute purulent inflammation of the middle ear to whom he administered the drug in the form of a trituration. In quite a number of cases the inflammatory condition was very much diminished by the drug, and in some instances he thought that healing occurred much more rapidly than under some other forms of treatment. He had probably used it oftener in tinnitus aurium dependent upon chronic inflammation of the middle ear. In some cases he obtained good results, in others he failed. He hoped to be able at some future time to make a more complete report of collected cases; he was satisfied, however, that the drug had its decided advantages.

DR. FARNHAM thought that viburnum prunifolium possessed marked powers as an anti-abortive and as a remedy in dysmenorrhœa and menorrhagia. In

his experience drachm doses every three or four hours had certainly produced marked effects. He had had one case, a patient with hemorrhagic tendency, who had miscarried six times, and always as early as the third month. She was put upon viburnum prunifolium alone, and went on to the sixth month of pregnancy. Unfortunately, however, just at the time when the catamenial flow would have been due, she was hurried off in a carriage one stormy night to the death-bed of a relative. The excitement proved too much for her, and brought on a miscarriage, the child living twelve hours. Next year she gave birth to a twelve-pound baby. No other drug but prunifolium was used, supplemented by hygienic treatment and rest for four or five days every month, at the time the period was due. The patient had no specific taint.

Dr. Purdy had used the abstract of viburnum opulus in doses of four to ten grains with good success in dysmenorrhœa. He had not yet completed his notes. Two of his patients, sisters, had had relief for every period since the administration was begun.

Dr. Piffard objected to the statement that the eclectics had contributed much to our knowledge of the therapeutics of our plants, and gave the credit to the regular profession, and referred to Bigelow, the Bartons, Rafinesque, and others as investigators.

Dr. Johnson thought that the war of 1812 probably acted as stimulus to the study of indigenous remedies, forcing people, as it did, to look out for drugs in their own country. Shortly after the war with Great Britain, a number of great minds were engaged in investigations upon the subject of our medicinal flora. Bigelow, the Bartons, and others carried on a series of researches more thorough than any previous ones or any that have been made since. The most valuable works ever published in this country on the medical botany of the United States were published at that time by *regular physicians*. He was inclined to agree with Dr. Piffard's statement that for the knowledge of those plants whose virtues are recognized the regular profession is by no means indebted to the eclectic school.

Dr. Morrow had not intended to bring up an issue in the matter, but had simply stated his own opinion. He had in view such drugs as podophyllum, leptandra, geranium, cimicifuga, and other drugs which may be considered as representatives of our indigenous materia medica. Under irregulars he included eclectics, old Thompsonians, etc. Science was the adopter rather than the discoverer of medicinal agents.

The question, said Dr. Piffard, was whether the regular, which, in fact, antedated the irregular, was the more valuable literature in regard to the use of plants. Although the knowledge of the therapeutical activity of gelsemium was acquired accidentally, the matter was first investigated by a regular physician. For the investigation of two remedies, hamamelis and lobelia, credit is due to the eclectics. Many indigenous remedies were investigated and employed by regular physicians during the war of 1812; subsequently American drugs were considered "off color," and the abandoned medicinal agents were utilized by the eclectics.

Dr. Johnson had endeavored in his paper to go lightly over the indigenous medicinal drugs without expressing any opinion in regard to their utility, merely reflecting the general appreciation of them by the profession. Concerning viburnum he had not intended to express any views. He had been under the impression that chenopodium was a drug of foreign origin. The sea-weeds fucus vesiculosus and fucus nodosus were of economic importance, but other species, especially the chondrus crispus, were of greater value. Chondrus crispus was well known to the physician. It was employed to make jelly. It was as common from Cape Cod north as fucus vesiculosus or fucus nodosus. There was, moreover, another weed, the laminaria saccharata, related to the laminaria digitata, which was used by the people as food. He was gratified to think that he might have induced the members to pay further attention to this very interesting subject of indigenous remedy. Even in his experience as a practitioner of medicine, he had seen many therapeutical fashions. A large number of plants were investigated in the early part of the century and then cast aside. The discarding of these remedies was largely due to the influence of the eclectics. Thompson, in his ignorant but energetic way, endeavored to make people believe that mineral remedies were dangerous; he limited himself to a few powerful vegetable drugs, purged, nauseated, and sometimes killed his patient, and caused these medicinal agents to fall into disrepute. The regular profession naturally turned to mineral remedies, and the eclectics took up the vegetable drugs the former had described.

A sample of yerba santa, a plant growing in large quantities on the Californian mountains, was exhibited by Dr. Fuller. It was a remedy which had been used by the Spaniards for centuries, and was reputed to have slight stimulating powers in pulmonary disease, and healing properties when applied locally to cuts and lacerated wounds. A collection of elixirs having been exhibited, Dr. Piffard made a few remarks in regard to these preparations in general. "An elixir," he said, "is composed of four classes of ingredients: 1st, alcohol; 2d, syrup; 3d, various spices or aromatics; 4th, the medicine from which the elixir derives its name. It contains less alcohol, it is true, than the tinctures; the latter contain no sugar, have only the flavor derived from the drug itself, and, as a rule, are not very agreeable to the palate. Most elixirs, however, are purposely made pleasing in taste by enough alcohol, sugar, and aromatics; in other words, they are, to all intents, simply 'rock and rye,' with some medicinal agent. When we administer them we must remember that we are giving so much liquor, and that patients often continue to use them as a pleasing stimulant long after the necessity for their employment had ceased. They lay the foundation for tippling and inebriety. There are cases in which simple elixir may be used to good advantage in diseases of short duration, as, for instance, in intermittent fever, to disguise the taste of quinine. On the whole, however, elixirs are not a desirable class of preparation."

The Society then went into executive session.

Iodoform is soluble in the following essential oils in the various ratios given:

In Oil of Turpentine	4	per cent.
" Lavender	7	"
" Cloves	8	"
" Fennel	9	"
" Lemon	9	"
" Rosemary	14	"
" Cinnamon	14	"
" Caraway	16	"

Correspondence.

THE COUNTY SOCIETIES AND THE NEW YORK CODE.

To the Editor of The Medical Record.

Sir: The Medical Society of the State of New York has been blamed, scolded, "scouted," and "jeered" to the heart's content of the courageous Stalwarts of the medical profession. They have had it all their own way these five or six months, and the eagerness of their bold onslaughts in the American Medical Association and the numerous State medical societies and the numberless county medical societies, has been something quite appalling to behold. But I fail to see the first man or society or association who has taken the trouble to inquire into or to recognize or give credit to the real motives of the New York State Society for the change of their Code—which may precede the abolition of all codes, after all. They have taken it for granted that they can make other people believe that the majority of the New York State Medical Society consists of greedy specialists, who are vulgar enough to give public expression to their hunger after consultations with quacks. They make also believe that they take it for granted that the change was made after mature premeditation of the few, and to the complete surprise of the many. *They know, however*, and you know, and the county societies of our State know, that such was not the case; and in regard to this fact, I want you to warn the county societies of *our State not to allow themselves to be propelled into undue action.* How would it do to once more direct the attention of the county medical societies to the fact that the change was made after the hearing and discussing of the report of a special committee appointed a year previously, and consisting of five of the best known men of the State (three of whom were once presidents of the State society), after prolonged discussion in a well-attended meeting, and during a session which was attended more fully than most of those which preceded it, *for the only purpose of preventing the county societies of our State from committing themselves to a positive policy.* It is a grave mistake, in my opinion, to tie the hands of the delegates, and to force them to vote one way or the other. It is undignified to compel their best men—and I hope the societies will (and you ought to urge them to) send their best men—to vote in spite of all they may hear and be convinced by, and to close their ears against everything but the instructions of their absent friends in their far-away counties. *The meeting of the State Medical Society next February is to decide* the fate of the Old Code, the New Code, and perhaps all codes, and, it appears to me, you ought to request the county medical societies *to send their delegates with but one binding instruction, viz., to* ATTEND *the meeting in February, in which the Code question will be discussed,* and, I hope, finally settled. Meanwhile, I think you will not be anxious to discuss again, for a long time to come, the matter which has proven a rich source of edifying editorials and alarmistic resolutions to high and low.

Very truly your friend, * *

[The situation is so well described in the foregoing letter, and the advice given is so eminently sound, that it is unnecessary to offer any comments. —Ed.]

HOW TO COUNT A RAPID PULSE.

To the Editor of The Medical Record.

My Dear Sir: In The Record of July 22, 1882, I notice an item referring to a statement by Professor Pribram, that "he had a case of 'vagus neurosis' in which the pulse reached three hundred beats per minute." In the context is an inference that such a pulse cannot be counted. In 1870, while experimenting upon the action of alcohol on birds, I found myself unable to count the rate of the heart's action by the usual method when the contractions were over two hundred and forty per minute (the heart's action is very distinct in birds). By the following simple method I was able to count to two hundred and eighty without difficulty: During a definite part of a minute, one-fourth usually, with a common lead pencil, dots were made upon a sheet of paper *synchronous with the heart-beats*, as heard over the cardiac region. The dots were then counted, and the number calculated for the whole minute. A pulse of *four hundred* could be taken in this way, provided each pulsation were distinct enough to be discriminated by the touch. The indistinctness of the separate pulsations of the heart alone fixes the limit to the use of this method, as the human hand is capable of making intelligently and with accuracy, at the rate of four hundred and fifty dots per minute, for thirty seconds, which rate is probably beyond not only that of the human heart, but also of the pulse of any of the lower animals available for experiment. I have had a sufficient experience with this method to know that it is of practical value, especially with children.

I have been astonished at the actual rapidity of the heart's action, in a few cases which I should have considered as beyond counting by any other method. All who have used the sphygmograph know how difficult it is to get a tracing when the heart is beating to one hundred and forty even; so that this instrument, to say nothing of the fact of its expense and inconvenience, is not nearly so well adapted to the taking of a very high pulse as even the simple finger and watch method. By the method described above, all movements, whether of the body or not, that can be seen, felt, or heard, can be counted up to four or five hundred per minute, provided they are sufficiently distinct to be discriminated. Fortunately, the appliances are always at hand, and their use so simple, and at the same time so accurate, that it need never be said that a pulse is "too rapid" for counting.

Very truly yours,

A. W. Abbott.

613 Second Avenue, S., Minneapolis, Minn.,
July 25, 1882.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 30, 1882, to August 5, 1882.

Munn, C. E., Capt. and Asst.-Surgeon. Granted leave of absence for one month, with permission to apply for two months' extension, when relieved by A. A. Surgeon T. H. Pleasants. S. O. 147, Dept. of the Missouri, July 28, 1882.

Shufeldt, R. W., Capt. and Asst.-Surgeon. The leave of absence granted him in S. O. 92, April 21, 1882, from A. G. O., is extended one month. S. O. 178, A. G. O., August 2, 1882.

HOPKINS, W. E., 1st Lieut. and Asst.-Surgeon. To proceed from Fort Adams, R. I., to Camp Washington, Gaithesburg, Md., and report to the Commanding Officer for duty. S. O. 132, Dept. of the East, July 31, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 5, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
July 29, 1882.	1	7	38	2	19	28	1	0
August 5, 1882.	2	10	24	2	23	30	1	0

HOW TO DEMONSTRATE TUBERCLE BACILLI IN THE SPUTUM OF PHTHISICAL PATIENTS.—Baumgarten recommends the following method as more convenient than that employed by Koch, and as equally efficacious. A portion of the sputum is dried on a cover-glass, and then treated with potash—one or two drops of a thirty-three per cent. solution of caustic potash added to a watch-glass of distilled water. The tubercle bacilli can then be readily seen with a magnifying power of four or five hundred diameters, and a little pressure renders them still more distinct from the enclosing detritus of tissue. In order to preclude the possibility of confounding the bacilli of tubercle with those of other species, the cover-glass may be raised and placed aside until the layer of fluid on its under surface is dry, and then passed two or three times through a gas flame, and then on it may be placed a drop of an ordinary watery solution of aniline violet or any other nucleus-tinting preparation of aniline. All the putrefaction bacilli appear under the microscope as an intense blue or brown (according to the testing agent and its strength), while the tubercle bacilli remain absolutely colorless, and can be seen with the same distinctness as in the ordinary potash preparation. The whole process does not occupy more than ten minutes.

THE AMERICAN SOCIETY OF MICROSCOPISTS will hold their next meeting at Elmira, N. Y., commencing August 15th, and continuing four days. The first session will occur on Tuesday, 15th, at 2 o'clock P.M., and thereafter from 9 to 12 in the forenoon, and from 2 to 5 in the afternoon. The Elmira Microscopical Society will entertain all members of the American Society, and will tender them an excursion, which will embrace a visit to Watkins Glen, a banquet at the Glen Mountain House, and a ride on Seneca Lake.

NITROUS OXIDE.—Further experience has not changed the relative position or very much enlarged the sphere of action of nitrous oxide. That it is the safest of all anæsthetics has been established beyond a question. In one institution where such administration is subject of record, this gas has been given over 100,000 times, and not only without a death but without causing in a single instance symptoms sufficiently serious to necessitate transporting the patient home in a carriage. In the city of Philadelphia alone, it has been given over 133,000 times without a death, and without any injurious results. Death cannot be justly attributed to it in more than four cases since its introduction.—*F. C. Reeve, in Holmes' Surgery, American Edition.*

FOREIGN BODIES IN ALIMENTARY CANAL.—Dr. E. Field, of Red Bank, N. J., writes:

"CASE I.—A few weeks ago, I was called in to see a female suffering severely from hæmorrhoids, with the following history: Had just been confined (child three weeks old, but had no trouble during gestation); ten days after confinement was attacked with a severe hemorrhage from the bowels and protrusion of hæmorrhoids. This continued for ten days, two or three times daily, accompanied with pain, at which time she came under my care; had had no previous treatment.

"It was the third attack of the kind she had experienced, but the bleeding had been slight in comparison with the present one, and had been easily controlled; was always more or less constipated, going days without a passage.

"The hemorrhage continued in spite of treatment, the patient declaring she passed a quart of blood at each stool; in one she noticed some pus. The next day, in reducing the hæmorrhoids, which she was able to do easily, she felt something prick her finger, and after they were reduced felt a sharp pricking in the rectum; the following day there was pricking in the anus with the passage and upon examining the stool a pin was found bathed in pus.

"On the same day her courses came on and lasted three or four days, being the fifth week after confinement. Since that time (two weeks) the hemorrhage from the bowels has been very slight, merely a trace of blood with the passages, and the hæmorrhoids seldom protrude.

"The pin was an ordinary one, such as is used by ladies, was straight, and discolored. The patient tells me it was not expelled without some effort on her part; was pulled away with her fingers when she found the point protruding, and the pus was very tough, clinging to the pin. Nothing peculiar in any other particular about it.

"CASE II.—Was called hastily to see a child, eighteen months old, who had swallowed a thimble. The child, in playing about the floor, had placed the thimble in its mouth unnoticed by its mother. On raising her up she suddenly choked and the accident was discovered. To make matters worse, the father, upon finding that he could not remove, was advised to push it down, which he attempted to do. Upon examination I could feel the upper and smaller edge of the thimble in the fauces.

"The child was vomiting continuously. By careful manipulation, and being blessed with an unusually long finger, I succeeded in passing below the thimble, turned it in the pharynx, slipped my finger into and removed a thimble an inch long, open at both ends. To the latter condition the child probably owes its life, as she could breathe through it readily. It was in the throat about forty-five minutes.

"CASE III.—A girl, seven years old, was picking her teeth with a bent pin of ordinary size, when by some misfortune she swallowed it. Her father came to my office, saying she was suffering much pain.

Being unable to attend the case immediately, I sent a brother physician. Upon examination, he found the pin low down in the œsophagus. While attempting to remove it with forceps, it slipped from his grasp. The child was immediately relieved, and so far has suffered no ill-consequences."

Climatic Treatment of Phthisis.—In a communication to The Record, Dr. R. B. Haywood, of Raleigh, N. C., states his doubts as to the propriety of sending consumptive patients to Florida and other debilitating climates. He expresses himself as being a convert to the views of those who, adopting a tonic plan of treatment, have with benefit turned the invalid current to the seashores of New Jersey. During his thirty-eight years of practice he has never sent a patient to Florida *with any satisfactory result.* On the contrary, he is convinced that the breaking down of the tubercle is hastened by such procedure. The climate of Florida, according to our correspondent, is exceedingly debilitating, miasmatic, and productive of complicating pneumonia. The country is subject to "northeasters," the temperature varies greatly from day to day, and insect life is particularly obtrusive and harassing. Experience, he claims, has taught him that the humidity, particularly where the air is free from impurities, exercises no baneful effect. Sea air is tonic, pure, and medicinal. If there is any virtue in inhalations, he argues, the sea air breathed should also be of efficacy in view of the various ingredients of the sea water, which it carries with it—compounds of chlorine, sulphuric acid, lime, magnesia, phosphoric acid, etc. The effect of sea air is quickly manifested in elevating the tone of the system, increasing strength, and exercising a marked action in anæmia and general debility. For the last three years Dr. Haywood has been in the habit of directing his patients to go to Morehead City or to the town of Beaufort, latitude 34° 41', situated in the "bight" of Cape Lookout, N. C., and thirty miles from the hundred fathom line of the Gulf Stream. The sea breeze, we are told, is constant and delightfully tempered by the Gulf Stream. The mean annual temperature is identical with that of the city of Rome, in Italy, *i.e.*, 61°. Raleigh, almost on the same parallel, shows a mean of 57°, and Asheville, still farther west, one of 54°. Havanese invalids often suffer from the cold as late as March 10th, and "northers" frequently blow during half the winter. Two of the writer's patients who had sojourned at Morehead last summer express themselves as feeling almost entirely well, while a third was greatly benefited. After discoursing upon the facilities of this place, Dr. Haywood concludes by recommending it not only to consumptives, but also to the anæmic, uterine cases, to persons suffering from general debility, and as an abode for teething children.

Impure Vaccination and Puerperal Fever.—Dr. J. T. Deemer, of Manorville, Pa., reports two fatal cases of puerperal fever, which he believes to be due to the indirect result of impure vaccination. The facts are as follows: On Januury 26, 1882, he was called to see the five children of a neighboring family, whom he found suffering from an erysipelatous inflammation, resulting from vaccination with humanized virus. Two days after he learned of the death from septicæmia of a girl of twenty-one, who had been vaccinated from the same scab. Some six or seven other children also vaccinated therefrom passed through severe forms of blood-poisoning, and made slow recoveries. It is upon the following cases, however, that the author lays stress: First, Mrs. S. M——, aged forty-two, confined on February 1, 1882, was seen on February 4th and found to be suffering from puerperal fever. Death occurred within a week. During labor she had been attended by a midwife coming from the dead girl's house. The second case was the mother, aged thirty-three, of the children mentioned as being first vaccinated. On February 16th a normal labor set in at the end of the eighth month. The same midwife, being the only person to be had in the emergency, was called in and did her part well. But that night marked the onset of a puerperal fever, which carried off the patient the next day. Dr. Deemer thinks that this whole series of catastrophes was primarily due to the employment of impure lymph, by inoculation with which the poison of erysipelas was at the same time propagated.

Race in its Relation to Surgical Operations.—The black races and the oriental nations sustain injuries and operations best; next stand the Anglo-Saxons; and, according to M. Chauffard, the Latin race is as far behind them as they are behind the black race. The immunity of the Chinese and Japanese to mortality after operations is remarkably shown by the various reports of medical officers serving in the East. It is stated that pyæmia is a rare occurrence among the *Chinese*, and in a recent report of 138 operations for lithotomy performed on persons of all ages and occupations, from two years old to eighty, but eight deaths occurred. A similar immunity is said to be enjoyed by the *Japanese* in regard to pyæmia, septicæmia, tetanus, and erysipelas. In our own country, the *negro* has generally borne injuries and operations well, provided that he has not been exposed to the after vicissitudes of cold and dampness. This was remarkably shown in the experience of the negro brigades during the late American war. According to the observation of the writer, when these soldiers, injured in battle, were cooped up in overcrowded and overheated hospitals, they did well; when, however, removed to well-ventilated pavilion hospitals, and placed under such hygienic conditions as are most favorable to the white American soldier, they did badly, suffering severely from intercurrent pulmonic and other acute inflammations. The *Irish*, from their peculiar mental elasticity, also bear operations well, and so do the more phlegmatic *Germans*. The *American* is not so good a patient; his activity of mind renders him restless and impatient of restraint; he looks anxiously forward to the end of his convalescence, and not infrequently ventures out of doors too soon, and thus hinders his own recovery.—*J. H. Brinton, in International Encyclopœdia of Surgery.*

Alcohol at Meals.—Before quitting the subject of dining, it must be said that, after all, those who drink water with that meal probably enjoy food more than those who drink wine. They have generally better appetite and digestion, and they certainly preserve an appreciative palate longer than wine-drinkers.—*Sir Henry Thompson.*

Jacobi on Virchow.—Professor Jacobi's lecture on Virchow, lately published in The Record, has been highly complimented and widely appreciated here and abroad. It may interest the many friends of both subject and author to learn that the *Revue Scientifique*, for April, contains a careful translation of the whole article.

Original Communications.

TEN YEARS' EXPERIENCE IN THE TREATMENT OF STRICTURE OF THE URETHRA BY ELECTROLYSIS.

By ROBERT NEWMAN, M.D.,

PERMANENT MEMBER OF NEW YORK STATE MEDICAL SOCIETY, SURGEON NORTHWESTERN DISPENSARY, ETC.

PART II.

(Continued from p. 174.)

III.—HISTORY OF THE TREATMENT OF STRICTURE OF THE URETHRA BY ELECTROLYSIS, AND CASES OF OTHER PRACTITIONERS AND THEIR METHODS.—That electrolysis, in the treatment of strictures, is a success, is an established fact; but this is much reaffirmed by the record of the cases just stated, in which all the patients remained under observation from five to ten years, after having been dismissed as cured. Nevertheless, some of my medical friends, in speaking of this subject, appear to think that I am the only man in the world who practises electrolysis, and even authors of recent publications mention it with some doubt. For this reason, I will here give a short history of the electrolysis, and thereby prove that I have the honor to be in good company with predecessors, contemporaries, and followers, who all rejoice in similar good successes.

The first experiments were made by Crussel and Wertheimer, 1847. The pioneers of the method were Mallez et Tripier;[1] next comes Althaus,[2] Willebrand, Ciniselli, Scontetten, Bautisto Campos,[3] Dutrieux,[4] and Brenner.

Dr. Carl Weiss, of Buffalo, commenced electrolysis in a stricture case in April, 1868. He has his own method and instruments, with which he has continued to operate successfully. Being on a visit in Buffalo in 1878, it gave me great pleasure to witness his operation, and to find that our ideas on this subject, as our results, are alike. He has kindly furnished me with notes of a few of his cases, which will follow here. Simultaneously with me, Dr. T. F. Frank,[5] of Pittsburg, operated in 1874. He met with entire success, and continues his method frequently in an extensive practice. Only a few days ago I received a letter from him, in which he expresses his surprise that surgeons still persist to cut and dilate strictures, when electrolysis has such brilliant results.

As a contemporary, I am pleased to mention Dr. D. Prince, of Jacksonville, Ill., who operated April 9, 1873, and who deserves great credit for his contribution to the practical science in electricity.[6] His first case was a stricture of twelve years' duration, an aggravated case, which resisted all treatment. Dr. P. cured this case with electrolysis in sixteen days. I agree fully with Dr. Prince on this subject; but his brainwork, and the way to express it, is so original, that I cannot refrain from quoting *verbatim* a few lines from his report: "The *modus operandi* of the treatment seems to be the induction of the solvent action of the alkalies, and the disintegrating effects of diffused hydrogen. The perfection of treatment consists in so adjusting the size and force that no blood will be lost. From the encouragement afforded by these achievements, and those which have since been realized, this method of treating strictures of the urethra is rapidly coming into good repute."

An elegant writer and earnest espouser of our subject is Dr. John Butler,[1] of this city, who met with uniform success in his practice. His opinion of the value of electrolysis is best expressed in his own words, as follows: "The time is not far distant when electrization, skilfully and scientifically used, will be the universally acknowledged remedy for strictures of the urethra; and in the coming textbooks on surgery it will be shown to far surpass the old mechanical means for restoring the permeability of the urethral canal; and the old methods of divulsion, forcible dilatation, etc., will, by and by, hold the same relation to urethral surgery that heathen mythology does to the religion of to-day—taught in our schools only as matters of historical interest, belonging to the literature of a bygone age."

Others who use the electrolysis constantly are Dr. Neftel, of this city, and Dr. H. Mynter, of Buffalo. The late Dr. Benson, of Hoboken, also employed it. Dr. G. M. Schweig, of this city, had the kindness to write me on May 6, 1882. His experience I quote as follows: "For the last four years I have only employed electrolysis to remove submucous callosities or indurations of the urethra, and there *always* successfully. To remove callus, I introduce the negative pole to the affected spot, connect the positive by sponge electrode anywhere on the patient's cuticle; leave it *in situ* ten minutes, a few minutes more or less, with a current as strong as can conveniently be borne inside; if too strong for the outside, I simply move the positive electrode, and keep shifting it, as required. A few repetitions of this are usually needed." When this method was in its infancy, it was thought that the electrolysis had no influence on callus. As Dr. Schweig has been always successful in absorption of callosities, I know of no stricture which would not be amenable to our treatment; and the fact is, that during the last five years I have not met with a stricture, no matter how bad it was, which was impassable to the electrode bougie.

Dr. A. S. Wolf, of Plattsburg, now in Texas, and his son, getting acquainted with my method of treating strictures, adopted the method, and have since practised it with success. Dr. A. Wolf's son told me that while Contract Surgeon, U. S. A., in Texas, he had many cases of stricture among the soldiers of the army; he used no other means than electrolysis, and always cured his patients.

My friend, Dr. A. T. Douglas, of Rondout, now in New London, became an enthusiastic adherent of my method, and has used it with success in many cases since I read my paper before the Ulster County Medical Society, and operated in open meeting on an old case, which was known to most of the members present. The patient, a colored man, was troubled much, had been operated upon in various

[1] Mallez et Tripier: Traitement des rétrécissements urètraux par la galvano-caustique chimique negative Compte Rendu de l'Acad. des Sciences (Bulletin Therapeutique, Mai 30, Med. 58).
Mallez et Tripier: De la guérison durnble de rétrécissements de l'urèthre par la galvano-caustique chimique.
Mallez et Tripier: London Lancet, October, 1871.

[2] Althaus in Goerschens Deutsche Klinik, No. 34-36: Heilung der Harnroehren-Stricturen durch die Electrolyse.

[3] Bautisto Campos: De la galvano-caustique chimique, comme moyen du traitement des rétrécissements d'urèthre. Paris, 1871.

[4] Dutrieux: De la galvano-caustique chimique dans le traitement des rétrécissements organiques de l'urèthre (Press. Med. Belge., No. 25, 1872).

[5] Multiple Strictures of the Urethra by Electrolysis. By T. F. Frank, M.D. (MEDICAL RECORD, Feb. 2, 1874).

[6] Transactions Illinois State Medical Society for 1873. Report by David Prince, M.D., of Jacksonville, Ill.,

[1] American Journal of Electrology and Neurology, October, 1879.

ways, and his stricture always contracted again. He was cured with our method, and many years afterward, Dr. Smith, of Rondout, informed me that his patient has remained well, without having had a relapse. Dr. Douglas has sent me notes of some of his cases, from which I will copy one, contained in a letter dated Rondout, January 12, 1879:

Case reported by Dr. A. T. Douglas, of Rondout.—H. W——, aged about thirty-two years, contracted gonorrhœa in the latter part of 1874. He was treated with copaiba, cubebs, sandalwood oil, and injection. He came to me in September, 1876, complaining of gleety discharge and difficulty in urinating. On examination, I found a stricture about four inches from the meatus, another three-quarters of an inch from the first. A No. 8 bougie (American scale) passed with some difficulty. The patient was very timid about the use of the bougie, as the entire mucous membrane of the urethra was very sensitive, and a suggestion of the trial of electricity excited so much alarm that I contented myself with the use of the bougie whenever he would come to my office, which was not oftener than once a week. Finally, in February, 1877, he consented to the trial of the battery, as he was going West in the spring, to remain for some time. A No. 9 bougie could be passed tolerably easy. An electrode, corresponding to a No. 10½ bougie, was used with a twenty-cell galvanic battery, which had been cleaned and refilled about three weeks before. Commencing with two cells, the slide was slowly passed till the sixth cell was reached, when the electrode passed the first stricture, and in about the same time the second was passed, without any further increase of the battery. He went West in April, and up to that time he had no reappearance of gleet or difficulty in urinating. In the autumn of 1877 he returned. He then had an occasional gleety discharge, and a No. 10 bougie passed with difficulty; the obstructions being at the same points as before, he would not admit that he had suffered from a fresh attack of clap. He was still rather timid about the use of instruments, but finally, after a month, submitted to another trial of the battery. This time the same number of cells were employed, and an electrode, a trifle larger than a No. 14 bougie, was used, and in about five minutes both strictures were passed. In about two weeks the same electrode passed without difficulty, and he left for the West in March, 1878, at which time he was well.

I will close this chapter with Dr. Weiss's six cases and his letter explaining his method. It will be seen that his method differs somewhat from mine:

From Dr. H. Weiss.—Letter.

"BUFFALO, July 29, 1878.

"My method of treatment has changed very little since my operation in 1868, two years after the communication of Ciniselli. I find the indication for an operation at once, whenever I am unable to pass the constriction easily with a bougie No. 4. Should I deem it necessary in a special case to make myself previously acquainted with the length and structure of the stricture, I would use for that purpose a very thin whalebone bougie, having a good button, which seems the most suitable instrument to me.

"In the electrolytic operation, I was in the habit formerly of employing a bougie No. 11 or 12, perforated at its anterior extremity, through which a silver wire of the diameter of about $\frac{3}{32}$ of an inch, and well rounded at its point, could be made to project.

"At the present time I am using, as you are aware, a bougie size No. 5 to 7, armed with an isolated egg-shaped button—diameter of No. 11 to 12 bougie, from the centre of which an electrode of $\frac{1}{10}$ to $\frac{1}{16}$ of an inch thickness projects about $\frac{3}{16}$ of an inch, and into which the somewhat thinner induction wire passes. This instrument has the advantage, 1st, to pass and be manipulated easier; 2d, it always and only comes in contact with the constricted part, as the most prominent point, crowding away the healthy tissues of the urethra.

"I give to the induction wire and to the isolating bougie *only that curve* which is in conformity, approximately, with the curve of the urethra, up to the point of stricture, and avoid the greater one, which would be demanded by the urethra in its upper third.

"Up to the present time, I have operated upon every one of my patients in the erect posture, with the legs wide apart, standing between two chairs, upon whose backs on either side he may support himself.

"I did this to avoid every possible pressure on the sides of the urethra, and to regulate the direction of the electrode through the rectum if it should appear that the instrument was producing tension of the membranous canal toward one side.

"I have in this manner operated so harmlessly and successfully that I have contracted the habit of considering the whole manipulation as a very trifling operation."

Six cases reported by Dr. Carl Weiss, of Buffalo.

CASE I.—R. R——, restaurant keeper, robust and of a healthy constitution. Has suffered for two years with stricture of the urethra consequent on gonorrhœa. Has had no treatment before. Tried to pass bougie No. 4, but without success.

First operation, April 16, 1868.—Instrument used, bougie No. 12, with a small aperture in front, to permit a passage of a silver wire of the thickness of $\frac{1}{16}$ inches.

The bougie was passed down to the stricture, five inches from the meatus, then the silver wire was pushed on until about $\frac{2}{16}$ inches of it protruded; it was then held firmly in this position.

A Siemens galvanic zinc and copper battery of fifteen elements was used for thirteen minutes, when the stricture of the length of $\frac{1}{16}$ inch was passed, as shown on a graduated bougie.

Only at the beginning of the operation did the patient complain of slight pain, which, however, diminished in a few seconds to only a prickling sensation. Ordered rest and a bland diet. In a few hours the patient voided his urine in a strong, normal stream, to his great satisfaction, and *without pain.*

No reaction or any other bad symptom followed. A few months later, however, the patient began to notice a little diminution of the size of the stream, but only seven years later could a decided contraction be demonstrated (at the occasional introduction of the bougie by the patient himself), so that the patient himself wished a repetition of the operation, especially as he intended making a trip to Europe. At the examination, bougie No. 4 could be passed 5½ inches, but No. 5 would not pass the stricture.

Second operation, March 11, 1875.—Instrument used, bougie No. 6, with an egg-shaped button, equal to No. 11, from which the silver wire ($\frac{1}{64}$ inch thick) protruded $\frac{3}{16}$ inch, and into which the battery wire ($\frac{1}{16}$ inch thick) ended.

The action of a carbon-zinc ammonia battery of

eighteen elements allowed the bougie to pass the stricture, which proved to be $\frac{5}{16}$ inch in length, in eleven minutes. He felt the pricking of the electricity only a few seconds, without really having pain. No reaction followed. Patient voids his urine in a strong stream and without any pain. In the course of two years there was little change, but during the last six months patient observes a diminution in the size of his stream, which prompts him to pass a bougie occasionally. No. 9 can be passed, but not at all times and always with a little difficulty.

Case II.—McG——, Englishman, of robust stature, has suffered for a long time with an urethral stricture of gonorrhœal origin. The stricture is situated 4½ inches from the meatus. Bougie No. 5 is still able to pass it.

Operation, June 8, 1868.—Instruments used, bougie No. 12, with silver wire as in Case I. An application of eighteen elements of Siemen's battery for fourteen minutes permits the passage of the instrument through the stricture in its full length (¼ inch). Slight pain in beginning which ceased after a few seconds.

The patient being sceptical as to the immediate effect, he was encouraged to pass his water, which, to his great astonishment, flowed in a strong, full stream. He took his leave, promising to return next day with the means of substantially expressing his gratitude. As he did not make his appearance, however, further observations could not be made.

Case III.—Michael Z—— (of Canada), aged seventeen, comes for treatment on account of a false joint of the right arm, following an ununited fracture. His cachectic appearance gave rise to a thorough examination, which revealed that since his earliest childhood he had great difficulty in voiding urine.

A stricture was found situated 3½ inches from the meatus, through which a bougie No. 2, but not No. 3, could be passed. The patient could only be persuaded to submit to any operation by the assurance that the cure of the stricture would improve his health and facilitate the healing of his arm.

Operation, May 27, 1869.—Instrument used, same as in Case II. Eighteen of Siemen's elements allowed the bougie to pass the stricture in seven minutes, the stricture being composed of a membranous ring. The operation was painless. The stream of urine never became quite so strong as the normal size of the urethra would permit, but after two years, according to patient's brother's statement, it was rather larger than smaller. The operation had obviously the most gratifying influence upon the healing of the false joint.

Case IV.—M. C——, a soldier of the garrison at Fort Porter, introduced himself as a "landsman" from the old country, with the request to be relieved of his trouble in urinating, from which he had been a sufferer for three months, as he feared detection and transportation to the hospital. Examination revealed a stricture situated 4½ inches from the meatus, and also a sparse gonorrhœal discharge. Bougie No. 9 could not be passed.

Operation, March 21, 1871.—Instrument used, bougie No. 12, with the silver wire. Eighteen elements of Siemen's battery permitted the electrode to pass through the stricture in nine minutes. Length of stricture, ⅛ inch. The pain was pretty severe, but only for half a minute, and then disappeared almost entirely. Three or four months later the patient made his reappearance for the first time and assured me that after the operation he had not had any more trouble, and also that the discharge had ceased at once.

Case V.—Louis S——, aged twenty-nine, of a very broken-down appearance, has suffered for four years from a gonorrhœal stricture. During this time he has submitted himself to different forms of —but, as it seemed, to no rational—treatment. According to his statement, he has repeatedly been totally unable to void his urine, and has then been subjected for hours to the excruciating pains of attempts at catheterization, until at last the urine would flow after a considerable loss of blood by the urethra. Examination shows a stricture, 5½ inches from the meatus. Bougie No. 4 could not be passed.

Operation, August 3, 1873.—Instrument used, bougie No. 6, with egg-shaped button of the thickness of No. 11, with silver wire, etc., as in Case I., Operation 2d. Twenty elements of the zinc carbon ammonia battery permitted the instrument to pass through the obstruction in twenty-one minutes. Length of stricture, $\frac{1}{16}$ inch. Some pain was felt in beginning, but it soon declined to only a prickling sensation. Ordered patient rest and a restricted diet. Patient promised to report in two days, but failed to do so, as he had left for Louisville on the day following the operation.

Case VI.—S. M——; history, traumatic stricture.

Operation, June 16, 1878.—Twenty-four elements of the galvanic battery were used for twenty-eight minutes, until the stricture could be passed to the length of ⅛ inch. Eighteen elements were used by me at first, but the advance being very slow and the patient not feeling any pain, I went on to twenty-four elements, by which means the advance was more rapid, and the patient still suffered no pain. A few minutes before the end of the operation the patient began to lose courage, complaining of his constrained position, and did not believe he could much longer remain in it. It being very unpleasant to me to discontinue the operation on that account, I encouraged him to hold out a few minutes longer, which he did with fortitude, obviously because he did not see me waver in my confidence when the bougie passed the stricture. On the other side of the stricture I found no further obstacle, but did not wish to explore further than 1 to 1½ inch. In withdrawing the electrode the mouth of the stricture gave a slight obstacle to the passage of the ivory button, which had the thickness of a catheter No. 11. This seemed to prove that the end of the stricture was less extensively disintegrated than the portion nearest the meatus.

July 20th.—Mr. M—— came to my office to report that he had been feeling very well since the operation, and wished to consult me as to whether it was necessary to introduce an instrument occasionally, and if so, of what kind, as the calibre of his stream had diminished perceptibly. On making an examination, catheter No. 9 would not pass the stricture. I advised a repetition of the operation, in place of the troublesome and yet not satisfactory introduction of bougies. As the patient coincided with my opinion, the operation was repeated on the following day.

Second operation, July 21, 1878.—The buttoned instrument, which could be introduced 6½ inches, passed the stricture in four minutes with eighteen elements of Siemen's, and was withdrawn without meeting with any obstacle. Although the button had the thickness of a bougie No. 12, the patient experienced no pain and left town on the second day after the operation feeling perfectly well.

IV.—The Theory and Practice of Electrolysis—Answers to Queries and Objections.—The practical part and success of electrolysis has been fully demonstrated in the foregoing pages by clinical facts. The modus operandi can be learned from the detail related in those cases, and therefore I will not repeat it here. I also exclude all matters pertaining to strictures in general, or treatment by other means than electrolysis, as not belonging in the scope of this paper. In regard to the theory of electrolysis, the galvanic and faradic battery, physiological effects of electrolysis on mucous linings, with experiments, therapeutical action of electricity, method of application and examination of the stricture, I refer to my former paper of 1874, as I adhere still to its contents as described there. The present paper is only intended as a continuation of the former, with additional clinical facts and observations for ten years, addendas and answers to objections raised. Some of my friends have even doubted the existence of electrolysis, and that it has any influence on strictures. Now the decomposition by electrolysis is a known fact, taught in any text-book on elementary chemistry; and therefore I will not dwell on its description. But for our purpose will only add an experiment, to prove that the two currents of electricity act widely different, and that we must use the galvanic constant current for our purpose.

Experiment for the Decomposition by Electrolysis.—Two small glass bottles are nearly filled with a solution of iodide of potassium. The bottoms of these bottles are substituted by a piece of a pig's bladder. The necks of the bottles are then closed by a cork, through which runs a conductor; a small wire of platinum is best. Both bottles are then placed in a dish of water; they may be apart from each other six inches, more or less. To the platinum wire of each bottle is attached one pole of a galvanic battery, which is then started with six or more elements. Six cells will illustrate the effect of the electrolysis, but a stronger current of course gives proportionately more effect. We will now observe in the bottle connected with the positive pole that in the white solution streaks of yellow appear, and in about five minutes the bottle contains only a dark yellow fluid, which is the iodine set free. At the negative pole the bottle's contents remain white, with white bubbles of froth in it, which is the hydrogen and potassium.

If we make the same experiment with a faradic battery, no change takes place. This practical experiment proves that we can only use a galvanic battery for the electrolysis, that at the seat of the stricture we must use the negative pole, and that the effect for the cure of stricture is a chemical decomposition by absorption, which I have called "galvanic chemical absorption." The negative pole acts as a caustic alkali, which will not hurt. Weak currents will only decompose, stronger applications will show a caustic effect, and very strong power will burn like galvano-caustic. We have it in our power to select and regulate the current, and thereby choose a method applicable to the nature of the case.

Methods.—This answers many questions which I receive, like: Have you changed or modified your method? How is it that others have a different method? Do you burn through the stricture? How can a stricture be absorbed? There is everything in a method. In my former paper I have mentioned and described three forms for use. Now I have explained this more in detail, and I have no objections to methods of others who apparently differ with me but in reality use the same principle. Some may have different instruments or another form of battery, or other battery fluids: all this makes no difference so long as the indication is fulfilled. There are different kinds of strictures, which is all conceded, but that does not need so many different forms of procedure in treatment. The condition is first to find out the nature of the stricture in all its detail and relation to surroundings and to the patient himself. Then make up your mind what to do and what you want to accomplish, at the same time not to want to accomplish more than you can do reasonably. Make your plan for the operation, how to do it, select your instruments, and operate with skill. There is a method in the method, and that is the art which leads to success. To the question, if I have improved my method, I have to answer that I have improved only myself by getting more dexterous, having operated so many years in the same direction. My opinion in relation to our subject is the same now as I have related it eight years ago. *Why then have others failed, and why is the electrolysis in urethral stricture not generally adopted?* In order to have success with strictures, it is necessary to be a skilful surgeon, who understands the anatomy and is master in handling the instruments. For our purpose the operator must also be an expert in electricity besides a surgeon. Some of our young men consider themselves surgeons after buying a new set of instruments in a rosewood case. If they do an operation bunglingly, they condemn a good method: and some old men never wish to adopt any innovations because they have not learned it at college. But old men must die off, and progress can not be hemmed in.

To what kind of strictures is electrolysis applicable? I answer, to all. While I was timid formerly, and said there might possibly be strictures of small calibre, or calcareous deposit, which will not yield to electrolysis, I now pronounce that during ten years I have not found a case which was not cured by our process, no matter how small the calibre, or how firm the deposits, and I have had to treat almost all bad cases. Most of my patients came from remote places, sent by their physicians. If their cases had not been very aggravated, they would not have come from Ohio and Illinois, and they could have been cured easily at home. Hundreds of cases have been under my care of all kinds of aggravated stricture, as traumatic and with complications, and not in a single instance has a failure of this method been recorded. Some patients have only come for consultation, or after one *séance* were persuaded to try another method, others have left for the country before being cured, some have absented themselves for other reasons. Certainly, that class I cannot claim as my patients, and they are excluded from my record. What is meant is this: all patients with strictures under my care, who have attended as directed, have been cured. The record of the cases has been taken with great care and is correct. I recollect once that a medical friend suggested that the stricture so treated might have been spasmodic only, when the history of the case stated exactly that it was an old traumatic stricture, complicated with a perineal fistula, having been operated on by an eminent surgeon before, and always contracted again. Besides, a spasmodic stricture will not yield to the galvanic current; on the contrary, will be made worse. The cure for a spasmodic

stricture is the faradic current. Many times my friends have volunteered to say that the treatment of strictures by electrolysis is nothing else than a dilatation, and that the electricity is only an innocent plaything. I will be glad at any time to demonstrate the action of decomposition by electricity. Often I have shown the action in the following manner: A bougie was introduced into the urethra and arrested in the stricture. Gentlemen present in turn each tried to pass the bougie through the stricture without being able to move it. Then, without moving the bougie, it was attached to the negative pole of the battery, and without any pressure in two minutes the bougie had passed and absorbed the stricture. This experiment has been made often in the presence of eminent gentlemen in the profession, and can be found in recorded cases. Hence the electrolysis of strictures is effected by absorption by the negative pole of a galvanic current. Another objection comes from Dr. Teevan, of London,[1] who condemns the method, because I recommend an interval of four weeks between the *séances*. But the doctor does not say *why* that is an objection. I should think it is a good feature not to trouble our patient in four weeks, who is made comfortable in the first *séance*, is not detained from business at all, can earn his living, is free from all pain and inconvenience, and after four weeks comes again to the office during his leisure hours. What a contrast to other bloody and painful operations, when a patient is kept in bed and cannot attend to his business. I have mentioned several methods, and the records of cases will show that I have operated at intervals of two days when necessary or practicable. The four-weeks' interval is mentioned as a precaution, when the second method of *galvano-cautery* is practised. But let me quote from my first paper of 1874, page 13:

"*First method.*—Electrolytic action by mild currents from batteries united for tension, produces gradual chemical absorption as before described. My predilections are in favor of the first method, and I use it because it is more desirable. If circumstances permit, I operate with it in preference to all others because it is safe and never has been followed by accident or ill effect. In fact, *it is the procedure here advocated practised and illustrated by cases.*" Therefore to sum up: There is no interval of four weeks practised, recommended, or needed in any *usual* operations. Only under certain circumstances a longer interval may be desirable, according to the method employed and general principles involved. Consequently Dr. Teevan's objection is entirely unfounded.

The next question is, if electrolysis involves any danger, to which an emphatic answer is given, "No." If a clumsy operator makes a false passage, or an instrument breaks in the bladder or ruptures parts, nobody will condemn all catheters in consequence. Concomitant accidents or intercurrent diseases may happen to the injury of the patient; but the operation of electrolysis, *as recommended by me*, is perfectly safe. Urethral fever happens sometimes after a single catheterization, but I have always avoided it in electrolytic application, if I had control over the patient.

The rule for avoiding urethral fever is to handle the parts not more than the patient's condition will permit, to give an antipyretic, and to insist on the *necessary* rest. In speaking of the necessary rest, I do not wish to be understood that every patient *must* rest after an electrolytic application, but this depends on the surgeon's judgment to give the orders in each individual case according to indications. Most of my patients were not detained at all from business; some went travelling immediately after treatment, as will be seen by perusing the notes of the recorded cases. Hence our method is just as safe as any catheterization, but safer than most methods practised for the cure of strictures of the urethra.

INSTRUMENTS.—*The battery.*—Any good galvanic battery answers our purpose, if the current is steady, without giving shocks by interruptions. A large surface of battery will cauterize with more intensity than any other known caustic. By using the necessary amount of electric current thus generated, to enlarge the sphere of action, too much inflammation of the surrounding healthy tissues may supervene, and thus aggravate the disease. No action should ever destroy healthy tissue, and the concentration of the electric current should be strictly confined to the diseased locality only. The battery works to advantage in the two following points:

First.—The intensity of the current can be augmented gradually, cell by cell, without any interruption of the current, so that the patient will hardly perceive the increase of intensity.

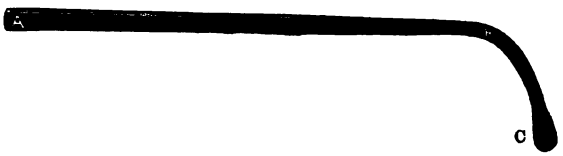
Second.—The quantity of electricity is reduced to a point sufficient to produce the most intense action on a very limited space. I generally use a carbon-zinc battery made for me by Luis Drescher; other batteries were made to order on the same principle for me by Chester. However, the make is immaterial as long as the current is steady, the slide easily moved without any interruptions of the current. The cells I have had made of hard rubber, which are preferable to glass, because they are lighter, do not break so easily, and on account of their thinner walls contain more fluid.

A rheostat, attached to the battery, is a nicety, convenient for some cases, but as a rule not needed, as the current can be sufficiently graduated from cell to cell, if the battery is well constructed. The amount of electricity to be used depends partly on the amount of work to be done, and particularly on the feeling and susceptibility of the patient, and for these reasons a galvanometer is of little use. More important is the electrode bougie, and the greatest care is needed to have these instruments perfect.* For many years I have used flexible catheters as insulators, inside of which runs a copper wire as the conductor; the end of the wire is attached to the negative pole of the battery; on the tip of the wire is a metal silver-plated bulb, which is connected with the cut end of the catheter, so that it makes a continuous smooth surface. For years I have experimented with all kinds of instruments in order to improve these electrodes. Novelties are not always improvements, and through many failures I have now come to certain conclusions, as follows:

Sounds for the correct exploration of the urethra must be either entirely flexible or stiff and unyielding. To the first class belong Nélaton's and Jaques's, and they adapt themselves to the curves and inequalities of the urethra. I have tried to use them for electrolysis; they may answer for certain cases, but, as a rule, they are not applicable for our method. The type of the second class of explorers is the steel sound. The operator has it in his hand and will to guide the sound where he pleases; it will not diverge from the course it is directed in, it is firm,

[1] London Lancet, June, 1880.

never yielding. If the sound makes a false passage the operator is responsible for it. The curve is not so material, but I prefer a short curve; because the operator can guide with his hand and adapt thereby the instrument to the curve of the urethra. Next, in a short curve, if the sound has a groove at the end on its convexity it can be used as a tunnelled sound, which is often very useful. The old-fashioned large curves were mistakes and have done much mischief in surgery. The guidance of an instrument can be done with a certainty only in a straight line; the more the opposite end diverges toward the curved line of a circle the less will it be influenced by the force at the straight end.



This is better illustrated by the diagram: If the instrument is pushed from A the influence of the force is most at B, and has not the slightest moving power at the end at C, but if the force is increased, the instrument will sooner break through an iron wall at B than move at C.

For this reason the old large curves must be condemned, as also all instruments which are elastic in whole or part, hence elastic bougies will never be certain. The model sound is the "tunnelled." By its construction Dr. Gouley has become a benefactor to suffering humanity.

The surface of our bougies must be smooth and well insulated, without any inequalities. The only points not insulated and acting as conductors are both extremities; the upper one a round wire rod for the binding post of the negative pole, and at the tip the egg-shaped bulb, which is the working power to pass through the stricture. Some consider a conical end best, and it may do for those who wish to engage the pointed end into the stricture, and then by a certain force push the thicker part of the instrument after it, which is nothing else than a forcible dilatation. For our purpose this would be objectionable, in fact would spoil the operation. For instance, if the instrument is a No. 10, and its conical end tapered equal to a No. 7, the electrolysis can naturally not work the stricture to a larger calibre than just No. 7. Now the end has passed and is free, while the thicker part of the instrument hangs, grasped by the calibre of the urethra, and cannot follow into the place nor push its extremity, or, in other words, the No. 10 cannot occupy room of the size No. 7. As the only factor of reliance in this treatment is the electric power of absorption, and not any force, it is evident that the egg-shaped bulb answers best. The length of this egg-shaped extremity is in proportion to the size of the instrument; for a No. 11 French the end is three-sixteenths of an inch, and for a No. 21 French three-eighths of an inch.

For examination of the urethra, better expressed for the condition of the stricture, the whalebone bougie à boule is an admirable explorer, and teaches *to see* with your fingers, whereas for real ocular inspection I use the endoscope as heretofore.

Conclusion.—Several hundred cases of stricture of the urethra have been treated by myself. Of perambulent patients, or those seen in hospital and dispensary service, the records are of no use, as it is impossible to follow up such cases for further reference. But from private practice I can easily tabulate one hundred cases who have been kept under observation for years, many from five to ten years, and all are well. Some of them *may* have acquired a new affliction, the calibre of some urethras may have contracted a little, or not have been restored entirely, and microscopically a pathologist n ay find a deviation from abnormal states, but for all practical purposes these patients feel well, are well, and enjoy life, without any interruptions to their daily avocations, and even do not wish any more improvement to their state of health. This article does not exhaust the subject under consideration, nor is it complete, but its intention is carried out, which is to continue my paper of 1874, with the clinical facts and observation of patients for many years. The conclusions are easily arrived at and expressed by saying in the treatment of strictures of the urethra, during ten years' practice, electrolysis has given entire satisfaction, and among hundreds of cases not one needed any other method.

68 West Thirty-fifth Street,
New York, July, 1882.

THE RECOGNITION OF MICROCOCCI.

By ROLLIN R. GREGG, M.D.,
BUFFALO, N. Y.

The criticism by George M. Sternberg, Surgeon U. S. A., in The Medical Record of April 8th, of my paper entitled "No Bacteria in Diphtheria," which appeared in The Record of February 11th, I have read with much interest, though I was not a little amused at his remark that my statements "could hardly come from one familiar with the literature of the subject." I can hardly see how one could have the boldness to make such assertions as my paper contained without such familiarity. But this is of no consequence in discussing so great a subject as the question of the existence or non-existence of bacteria in diphtheria; so we will pass on to much more important matters.

Were it true that I am not familiar with the subject, I cannot see that Dr. Sternberg has made a single valid point against my positions. The first thing said in my previous paper, after introducing the subject, was that "there is not the slightest difference to be found recorded by the best observers between the three classified forms of so called bacteria in diphtheria, namely, spherical, rod-like, and spiral, and the three exactly corresponding forms of coagulating fibrin, namely, granular, thread-like, and spiral."

Now, this statement was either true or false. If false, and Dr. S. had the proof of it, how much easier would it have been for him, and more pertinent to the subject, to have given that proof than to have gone through a long argument, based in part upon wrong premises, as we shall see, to show that I was wrong. The proof of my error in this regard would have overturned one of the fundamental principles upon which the first half of my paper rested, and thrown much discredit upon the whole of it. If, on the contrary, that statement was true, I cannot see that I was far out of the way, or very unjust to those distinguished men he names when I said "no observer of these assumed bacteria appears ever to have stopped for a moment to consider whether his alleged bacterial forms might not be the long and well-known forms of coagulated fibrin,

which are always found existing in the same positions and under precisely the same circumstances that bacteria are said to be found in diphtheria." But let us have the proof of my error, if there is any, and I will bow most humbly to it; otherwise both of these assertions stand unrefuted.

What is wanted more than all things else in connection with this subject is a familiarity with the *facts* of nature and of disease that apply to it. Therefore, amid the throng of individual opinions, beliefs, and assumptions upon all sides of the question, which are none too often based upon known truths, let us see if we cannot get right down to solid facts, and to what is actually known upon it.

To begin with, then, I will state one of the fundamental facts in diphtheria to be that granules and fibrils of fibrin are *always* present in enormous numbers in and about every diphtheritic membrane, and may also be found in every other locality in the human organism where bacteria are said to be found. Well, such being the case, I will be greatly obliged to Dr. Sternberg if he will point out a single instance where Pasteur, Oertel, Cohn, Klebs, Bollinger, Eberth, Koch, Klein, Wood, Formad, or any of the other numerous observers of, and writers upon, bacteria, have told their readers that there are great numbers—tens of thousands—of granules and fibrils of fibrin in every such membrane of any considerable size, and in the tissues about and beneath them; which granules and fibrils are of the same general forms, sizes, color, etc., of bacteria; or where they have given warning to others that they must be careful to discriminate, if making observations for themselves, between these similar forms of entirely different things; or, finally, when and where they have told their readers *how* to discriminate between these two sets of forms which are so nearly alike, and which are inextricably mingled together by the million, if, indeed, there are bacteria at all in diphtheria, as they claim.

This strange and unaccountable oversight on the part of so many educated and scientific men, on so simple a subject, is no trifling matter. They are all, I believe, annually instructing large numbers of medical students, and assume to instruct practitioners of every age and grade who read their writtings; but they have sadly neglected a plain and most important duty, if they have not told those who look to them for correct information, of the existence and presence of the said exactly corresponding forms of fibrin mingled with their assumed bacteria, and how to distinguish the one from the other. What is thus said applies so far only to those whom the said observers and instructors assume to teach, and the giving them accurate information by which to recognize with certainty what they are looking for. But when this teaching comes to be carried into the broad field of practice, it at once becomes of infinitely greater importance, and mistakes are certain death to numerous subjects.

If bacteria exist at all in diphtheria, and are the real cause of any of the fatal conditions of the disease, the profession should not rest until it finds what will destroy them the most effectually, without harm to the patient. If, on the contrary, they do not exist, all attempts by the physician, with harsh agents, to destroy, in his patient, what is only a phantom of his own imagination, would be fraught with the greatest mischief, and cause the inevitable sacrifice of many victims who might live without such treatment. Therefore, we must know the truth on all these points as soon as possible.

In saying all this, however, I would not knowingly detract from any man's well and justly earned laurels in any department of the greatly complicated field of science, or of scientific medicine. There is little enough honor bestowed now upon such men. But these subjects are higher than any man or number of men, and must be settled in the interests of truth, which cannot be done without they are thoroughly agitated and discussed in all their bearings.

To some, no doubt, it may appear that Dr. Sternberg has already sufficiently answered most of the preceding strictures when he says, "We have other and very positive methods of distinguishing these minute vegetable organisms," than "optical appearances alone;" and upon one of these he appears, himself, to place more reliance than upon any other, if not more than upon all others combined, for settling the questions at issue. He states the point as follows:

"Micrococci are unicellular vegetable organisms which, in a suitable medium and under favorable circumstances, multiply rapidly by fission, and the most reliable test is conceded by all authorities to be that of cultivation in a sterilized liquid. Minute spherical bodies, which multiply by fission, and which in the process of multiplication are joined in pairs or chaplets, are living organisms, and not granules of fibrin."

But is Dr. S. quite certain that all this is reliable, and a test from which there can be no appeal, when applied to those abnormal forms (bacteria as he calls them; granules of fibrin as I say) that are developed in connection with diphtheria? Let us see. Things are not always what they seem, and it is just possible than an element of error has crept in here with reference to diphtheria, that must be eliminated before we can know scientifically all there is of the subject. It should be understood at the outset, however, that no question is here raised with reference to the distinguishing features and method of development of real micrococci in the vegetable world where they properly belong. It is only in regard to their existence and development within the living human body in disease that this discussion is carried on upon my part.

The quotation from Dr. S. involves two points, namely, the natural development and rapid increase of micrococci by fission, wherever they may find the proper conditions of growth; and their artificial cultivation in a "sterilized liquid." To the first of these, or their increase by fission, we will first give attention. The fact is undoubtedly as the doctor states it to be in the vegetable world (no question being here raised upon that claim as already said), but did he never consider and apply the following facts bearing upon this point to diphtheria?

It is a law, or at least an invariable rule, of all organic nature, when undergoing natural disintegration, to break up in the exact inverse order of its primary growth, organs into sections, sections into fibrils, fibrils into granules, granules into their particles, and these into the elements of which they are composed.

Such being the case, the next point for our consideration is as follows: The false membranes of diphtheria are, as we know, constituted of fibrin, and this being so, they are built up by its being extravasated in a state of solution, then coagulated first into granules, when these granules unite themselves to each other "in pairs and chaplets" to form the fibrils, which next interlace to form the membrane. There is no other way by which the

extravasated fibrin, poured out from the blood as it is in a fluid condition, does or can organize into a membrane. Therefore, applying the law of disintegration of organic structures as just given to a rapidly rotting diphtheritic membrane, which is commonly seen in malignant cases, what do we find in the direction of our inquiries? The membrane rapidly disorganizes in the inverse order of its organization, first into fibrils, which fibrils next show evidence of parting at their granular unions, become constricted at those points, thus giving the appearance of chaplets, or the bead-like construction of which we hear so much, which next separate in the further process of dissolution into segments and pairs, and these into single granules. In no other way can a rotting fibrinous membrane go to pieces.

Therefore, here we have the whole question and claim of the existence of bacteria in diphtheria and the multiplication of micrococci by fission, in a rotting diphtheritic membrane, laid bare. And because the fibrils of fibrin do become constricted at their granular unions, as the first step toward their parting at those points, thus giving something of the appearance of a string of beads, then break into segments and pairs, and these into single granules, by fission, as stated, and all in more or less exact imitation of the method of multiplication of actual micrococci in the vegetable world, we have the process elevated into the most positive scientific proof that said chaplets and granules of fibrin are bacteria.

Has Dr. Sternberg never thought of these facts, or will he please tell me where the distinguished men he names have ever called attention to them, to show that here was a certain and positive source of error that vitiated all their teachings upon the subject? His great familiarity with the literature of bacteria must enable him to at once place his hands upon such utterances, if they have ever been made. But if this great fact never has been pointed out by them, what shall we say of their so-called science of bacteria; erected, as it would then appear, upon an entire misconception and wrong interpretation of a very simple question in pathology? If we are to have a "diffusion of scientific knowledge" we must first be sure that it is scientific, and that all the points are in.

Of that "most reliable test," as "conceded by all authorities," namely, the "cultivation" of micrococci "in a sterilized liquid," there is also something to be said. Here, too, we find the source of a great error, if I mistake not, when applied to diphtheria, and all for the want of proper discrimination at the outset. The sterilized liquid is broth made from the meat of a healthy animal, and heated to the boiling-point or beyond, to destroy the germs of vegetable cells that may have found admission into it. This broth holds in solution more or less of the fibrin that was contained in the juices and blood remaining in the meat after dressed for cooking. And it is this fibrin in the broth, coagulated into granules by the process called "cultivation," and it is these granules of fibrin thus coagulated, that are held up to us as the most reliable test to prove the existence of micrococci, or bacteria, in the blood and in the exudations of diphtheria.

If such are the facts, how is the coagulation of the fibrin in the broth brought about under cultivation? One of the processes is to place a small piece of diphtheritic membrane (which it must be remembered is for the most part fibrin) in the broth, and await developments. The fibrin thus introduced, whether it be in a patch of the membrane, in shreds, or only granules of it, causes that in the broth to coagulate or granulate. Consider the following proof of this fact:

Everything in nature begets its kind. This is an axiom that none will deny. So constant and universal, indeed, is it, that with many things which cannot beget their kind, properly speaking, nevertheless *induce* their kind. The least particle of the coagulum of sour milk, for instance, added to fresh sweet milk, begins at once the work that soon leads to the coagulation of that. The particle of the coagulum introduced does not in and of itself grow, or multiply indefinitely, but simply induces the change in the corresponding element, caseine, of the fresh milk that originally led to its own coagulation.

In a similar manner, particles of fibrin put into a fluid like the broth, which holds other fibrin in solution in it, induces a coagulation of the fibrin in that broth into granules. The added particles of fibrin do not grow or multiply of themselves in such enormous numbers as claimed for bacteria, nor at all. They simply induce the like change (coagulation) they had themselves previously undergone in their like substance, the fibrin of the broth to which they are added.

That such are the *facts* in regard to coagulated particles of fibrin inducing other fibrin held in solution in any fluid to also coagulate is shown by the following from "Carpenter's Physiology," page 60, where, in speaking upon the fibrillation of fibrin, he says:

"This *fibrillation* seems to bear a certain analogy to crystallization, being the result of forces which tend to withdraw the solid particles from their state of solution in the liquid, and to bring them together in a certain definite mode of aggregation; and there are certain peculiarities in the process which to some extent bear out this analogy. Thus, just as crystals will form around a nucleus of the same kind, from a solution which *would not otherwise have deposited them*, so will a fibrinous coagulum often separate from a serous fluid and form around a piece of washed clot of blood, or of the buffy coat, or of muscle or some other animal tissue placed in it, although the fluid (such as that of hydrocele) *would not have otherwise shown any disposition to coagulate.*" (The italics are my own, to show more distinctly the facts in this respect as they stand.)

The remarkable persistency in the coagulating power of fibrin, whenever and so long as any of it remains in solution in any fluid, may be seen from the following from "Virchow's Cellular Pathology," page 192:

"In many forms of pleurisy the exudation long remains fluid, and a number of years ago, a peculiar case came under my notice, in which, on puncturing the thorax, a liquid was evacuated which was perfectly clear and fluid, but in a short time after its evacuation had its whole mass pervaded by a coagulum, as is often the case with fluids from the abdominal cavity. After I had removed this coagulum from the liquid by stirring it, in order to convince myself of its identity with ordinary fibrin, the next day a fresh coagulum displayed itself, and this took place also on the following days. This coagulative power lasted fourteen days, although the operation had been performed in the midst of the heat of summer."

All this shows sufficiently the fact of fibrin coagulating, or being induced to coagulate, from any fluid in which it is held in solution; and there can be no doubt that in all similar instances to those

given by these authors, if the microscope were used, innumerable numbers of granules of fibrin, exactly resembling micrococci, would be seen in every such fluid after all the fibrin in it that could be coagulated in mass, or in shreds, were removed, while the broth spoken of would be generally, if not always, like such dropsical fluid after one or more coagula had formed in and been taken from it; that is, it would hold some fibrin in solution, but too little to allow of it being any more than coagulated into granules, or pairs and chaplets of the latter, with, perhaps, some fibrils more firmly organized, but not enough of these to form into a clot.

Another process, or the next step in "cultivating micrococci," is frequently to take a little of the broth, often no more than a drop, that has been "cultivated" with the diphtheritic membrane, and add that drop to fresh broth with the same result. And why? Simply because the granules of fibrin in that drop induce the fibrin of the fresh broth to granulate the same as though the fibrinous membrane were used. The smallest amount of the coagulum of sour milk, remember, at once starts coagulation in fresh sweet milk, in however great a quantity, and it is the same with the smallest particles of coagulated fibrin exciting other fibrin in solution to coagulate. Sometimes a drop of the blood of a diseased animal, containing the so-called micrococci, is used to start the cultivation in the broth, but as these micrococci in the diseased animal's blood are simply particles of the fibrin of its blood, coagulated therein by the disease, they induce the coagulation of the fibrin in the broth, as in the other instances.

This brings us to a consideration of the question of *inoculating* healthy animals and thereby causing the development of the assumed bacteria in them. Sometimes this is accomplished by placing a small piece of diphtheritic membrane under the skin of a healthy animal. When this is done we know that organized fibrin is placed there, and we know just as certainly that when inflammation is excited by it, the fibrin in the previously healthy animal's blood begins to coagulate locally, at first all through the inflamed part, into granules and fibrils as before shown, which are so like micrococci and rod-like bacteria that no distinctions have ever as yet been pointed out between them. This much we know. Then why are not the alleged micrococci developed in the broth, by placing the like diphtheritic membrane in it, the same? All analogy and all real facts yet known say they are.

Another process of inoculating healthy animals is to use a minute drop of blood from a diseased animal, as is done in cultivating the broth with such blood; and still another is to take a drop of the cultivated broth for the purpose. And in both of these cases local inflammation is excited at the point where the virus is introduced, just the same as though the diphtheritic membrane were used; and the fibrin in the fluids of the part is granulated in the same manner.

It must be borne in mind in this connection that proof was given in my first paper, which cannot be gainsaid, to show that fibrin does coagulate into granules and fibrils just as claimed, in every instance and in every locality where inflammation is excited. Therefore, it must do the same in every instance where inflammation is excited by inoculation with diphtheritic virus, in whatever form this is used; so this matter is placed beyond dispute, and the fact must be allowed in all discussions of the subject.

Then, when we place alongside of that fact the positive teachings of the bacterists, that the micrococci begin their local development and rapid multiplication at the point where they first secured their entrance into the tissues and blood, whether by inoculation or otherwise, and thence spread rapidly to other parts, we see that the correspondence and similarities are complete. The point where the fibrin begins to granulate rapidly under the effects of inoculation is the precise point where the alleged bacteria are claimed to begin their rapid multiplication in numbers; and the two being utterly indistinguishable in "optical appearances," so far as any differences yet pointed out, will the bacterists *please* tell us which is which?

The power of diseased or dead animal matter to compel the coagulation of fibrin, even in the living body, may be seen by the following from Carpenter, page 197:

"Again, the contact of dead animal matter with the blood appears to promote the coagulation of its fibrin in a very remarkable degree, occasioning *coagula to form* while it is *yet actively moving* in the *vessels of the living body*. Thus, M. Dupuy found that the injection of cerebral[1] substance into the veins of an animal occasioned its death almost as instantaneously as if prussic acid had been administered; the circulation being rapidly brought to a stand by the formation of voluminous clots in the heart and large vessels. These experiments were repeated and confirmed by M. de Blainville. The same effect is produced with *still more potency* when the substance injected is rather *undergoing degradation* than actually dead." (The italics here also are my own.)

If, then, a little healthy brain substance injected into the veins will kill as quickly as a dose of prussic acid, by forming "voluminous clots" of fibrin in the blood; and if any animal matter, "undergoing degradation," though not yet dead, is still more powerful in this respect, we can better see and understand the power which the vitiated broth or the blood of a diseased animal (that already contains coagulating fibrin) must have in coagulating the fibrin in the blood of a healthy animal inoculated with it.

The foregoing would seem to be sufficient to settle the questions of the cultivation of the assumed micrococci in animal broth, and reproducing them within the animal system by inoculation with diphtheritic blood or membrane; but another, though minor, point remains to be explained in this connection. That is the question of "fission," as it applies to the forms developed in the "cultivated" broth, or in the system by inoculation. But fission here is so in appearance only. The semblance of cleavage is really an act of union, not parting, of the granules; under these circumstances, therefore, exactly the inverse of what occurs in a rotting diphtheritic membrane, as will be seen by the following:

When two or more granules of fibrin first come together, and before they establish their more perfect coalescence into a fibril, there would necessarily be a line of demarcation between them at their points of juncture, which would, and no doubt has, furnished to microscopists a *deceptive* appearance of cleavage, or fission, and from which has been drawn the erroneous deduction that they must be, from that fact, micrococci; whereas such appearances in this case are the steps that these granules *must*

[1] There is no reason to suppose that cerebral substance possesses a more special influence than would be exerted by any other tissue which could be as easily mixed up with the circulating current (Note by Carpenter).

take to reach and perfect their combination into fibrils, and then into a membrane.

On the contrary, when the fibrin of the diphtheritic membrane is undergoing disintegration, it presents the real appearances of fission and multiplication of granules, as already sufficiently shown. But upon these two facts, namely, the primary union and the ultimate disunion of these fibrinous granules, which have been correctly observed but wrongly interpreted, has been erected the most remarkable and the greatest pathological error of modern times.

The bacterists have completely jumped all the formative stages in the organization of fibrin, its coagulation from the fluid state into granules, the union of the granules into fibrils, and the interweaving of these into the membrane, as though the latter could come into existence without any preliminary steps. They have considered the membrane only in its *completed* state, and a little something of its disintegration, and have used the *necessary* steps that had to be taken for it to get up into that state and down out of it as so much positive proof of the presence therein of bodies from a different kingdom of nature; thereby leaving out of their calculations three-fourths of the whole problem upon which its correct solution must rest. What kind of science is this?

Dr. Sternberg speaks quite confidently of chemical tests affording positive proof upon some points. But is he sure of this? Oertel says that bacteria "comprises forms of such exceeding minuteness" that "they stand upon the very borders of the visible," and "that as yet we possess only the most unsatisfactory knowledge of their nature and organization." How is it possible, therefore, as yet, to know much of the chemistry of such excessively minute bodies, when there is no actual knowledge of their nature, chemical or otherwise? Besides, unless I am greatly mistaken, Dr. S. will find granules of fibrin resisting destruction under many circumstances far more powerfully than it is possible for any pulpy vegetable cell or other vegetable structures excepting woody fibre. Again, what do we know, or what can we know at present, of the chemical nature of the many morbid secretions in and about the exudations of malignant cases of diphtheria, which must vitiate all chemical tests until those secretions are carefully separated from each other and thus tested; or how to compare the effects of various reagents upon any one portion of such exudations, in the presence of the others, to thereby lay the basis of accurate chemical knowledge?

I have wanted very much to go into a thorough discussion in this paper of the effects of diphtheria upon the red blood-corpuscles, their decolorization thereby under different processes, the nature and demeanor of leucocytes in the disease, the granules of broken blood-corpuscles therein, and the errors that have crept into the subject in connection therewith; but must defer all this to another time and paper. Perhaps, too, it will be just as well that this should be so, and settle one point at a time.

Recognition of American Medical Work.—It is worthy of note that one German medical journal, the *Deutsche Medizinal Zeitung*, gives a prompt recognition of American medical work. In its weekly "Runschau" are frequent quotations from medical journals in this country. Such catholicity is somewhat novel in Germany; still more so in France.

RAISING BABIES BY HAND; OR, ARTIFICIAL FEEDING OF INFANTS.[1]

By H. Z. GILL, A.M., M.D.,

PHYSICIAN TO SOUTHERN ILLINOIS PENITENTIARY, CHESTER, ILL.

The subject of the proper nourishment for infants is beginning to attract the attention which its immense importance merits. In 1881, at Salzburg, at a meeting of German physicians and naturalists, a report was made by a committee which had been appointed some months previously on the subject of substitutes for woman's milk in the feeding of infants. Some points which were well settled in the minds of most medical men of experience were here reaffirmed, namely:

First.—"That the mother's milk (woman's milk) is the only true material that is quantitatively and qualitatively suited to the development of the child, and which preserves the physiological functions of the organs of digestion, and, under favorable circumstances of growth, unfolds the whole organism in its completeness.

Second.—"That cow's milk is the only substitute for woman's milk.

Third.—"That the various artificial preparations of *crême conserve*, condensed milk, and the hundred other preparations, can in no way be substituted for mother's milk, and as exclusive food during the first year are to be entirely and completely rejected" (*American Journal of Obstetrics*, April, 1882).

Therefore the subject resolves itself mainly into this, viz.:

First.—The substitution of cow's milk for woman's milk; and

Second.—The preparation of cow's milk in order to make it a suitable substitute.

A comparison of the two is shown in the following by I. Straus ("Nouveau Dict. de Med. et de Chirurgie Practiques," tome xx., Art. Lait):

Elements.	Woman's milk. Per cent.	Cow's milk. Per cent.
Butter	2.05	3.05
Sugar of milk	4.06	5.02
Casein	2.88	4.86
Chloride of potassium	.07	.13
Phosphate of lime	.25	.18
The proportion of cream to butter is about 37 per cent.; hence the per cent. of cream in milk will be	6.75	9.45
One-fifth of the butter is buttermilk	1.35	1.89
	5.40	7.56

Donné says that woman's milk of good quality produces cream as follows:

	Volumetric test. Per cent. cream.
Woman's milk	3
Cow's milk	10 to 15
Ass' milk	1 " 2

Variation in cow's milk (*American Journal of Obstetrics*, April, 1882):

	Per cent.	Per cent.
Water	between 86.271	and 90.581
Solid matters	" 9.419	" 13.729
Of which—		
Casein and albumen	" 1.680	" 7.092
Fat	" 0.666	" 5.390
Milk-sugar	" 2.522	" 6 610
Salts	" 0.055	" 0.338

[1] Reported to the Southern Illinois Medical Association at Carbondale, Ill., May 18, 1882.

With the above capital points are included the secondary questions of breed of cattle, their care, the procuring, preserving, and preparing the milk, and such others as are studied at the various milk-cure establishments now in existence in Europe. Every practitioner has no doubt had occasion to notice the various preparations suggested and recommended in medical journals and text-books, as substitutes for the mother's milk, when this latter fails, from whatever cause; and it has appeared equally clear that the vast majority of these contained an amount of starch utterly incompatible with the digestive powers of the infant.

The special demands of my own family, as well as the general demands of my patients, led me years ago to study this subject somewhat thoroughly, so far as the literature was concerned, and to prove by my own experience the very unsatisfactory state of the subject of substitutes for *woman's milk*. I here use the expression woman's milk advisedly, for the best substitute for the mother's milk, when a substitute becomes necessary, has always been considered the milk of a wet-nurse.

We have learned that for the first two or three months of infantile life, the digestion of starch did not take place, or at least to a very slight extent, and yet the starchy preparations, or mixtures containing them, were still the only substitutes offered as food. The farthest point I had reached toward solving the problem with satisfaction until two or three years since, was the dilution of cow's milk (I always mean when a wet-nurse could not be obtained or afforded) with barley-water or barley-gruel, or oat-meal used in the same way as the barley, in the following form (see Dr. A. Jacobi: "Infant Diet;" "Rules for the Management of Infants during the Hot Season," recommended by the Jersey County, Ill., Medical Society; also, *Christian Advocate*, April, 1882). The table I had adopted, substituting the barley-gruel for the water in diluting the cow's milk, was the following, which answered very well in a majority of cases, and especially so after the child was four or five months old.

TABLE OF QUANTITIES FOR TWENTY-FOUR HOURS.

AGE OF CHILD.	Milk. Gills.	Water. Gills.	Food. Making Gills.
2 to 10 days old	1½	3½	4½
10 to 20 " "	1⅔	4⅓	6
20 to 30 " "	2⅓	6	8⅓
1 to 1½ months old	3	6¾	9¾
1½ to 2 " "	3⅓	7	10⅓
2 to 2½ " "	4	7½	11½
2½ to 3 " "	4⅓	7⅓	12
3 to 3½ " "	5	7½	12½
3½ to 4 " "	5⅓	7⅓	13
4 to 4½ " "	6	7½	13½
4½ to 5 " "	6⅓	7⅓	14
5 to 6 " "	7	7	14
6 to 7 " "	7½	6⅓	14
7 to 8 " "	8	6	14
8 to 9 " "	8⅓	6	14⅓
9 to 10 " "	8⅓	6	14⅓
10 to 11 " "	8¾	6	14¾
11 to 12 " "	9	5⅓	14⅓
12 to 15 " "	9⅓	5⅓	14¾
15 to 18 " "	9⅓	5	14⅓
18 onward	10	5	15

It will be well to have a cup holding a gill when full; eight ordinary tablespoonfuls equal one gill. Have a bottle of the right size for each meal, either to use or as a measure.

I found, however, that in many cases, with all the care I could command, these preparations, especially in hot weather, would not answer. Recognizing, as all have, the indigestible character of the curds of casein in the cow's milk, the great desideratum was to get rid of the casein or to render it digestible. I gradually reached the following plan, as given very well in a letter from Mrs. General Martin, written in answer to a request of mine, for her to state in her own language the method by which she carried out my directions in the management of her grandchild last summer, asking of her every particular, whether varying in any respect from my directions or not:

"SALEM, ILL., March 13, 1882.

"DR. GILL: It is with pleasure that I give you my experience in the use of your invaluable recipe for the pepsinized milk. When we commenced feeding baby, we milked two cows; one was fresh, but the milk was mixed. I put ten grains (10 grs.) of pepsin to one pint of milk, beating in thoroughly, then cover and set it on a quite warm stove, there to stand undisturbed by stirring until curded, sometimes as much as thirty minutes. When solid, beat up with a spoon, strain through a coffee-sieve, if large enough to hold the curd, or a thin, strong bag, add half as much water as there is whey; sweeten to the taste of mother's milk. I found it best not to use cream. . . . I feel that many weary mothers will be grateful, and unnumbered little ones made healthy and happy . . . Our little boy is as bright and healthy a little fellow as one would wish to see. He is now seven months old, and for the past week has been taken his milk fresh with a little water and sugar in it, and he seems to be doing nicely.

"Signed, MRS. MARTIN."

[All complimentary personal remarks have been omitted as having nothing to do with the subject-matter of the letter for public benefit.] They very soon found themselves compelled to return to the prepared milk as before. I had recommended to add a teaspoonful of sweet cream to each feeding, in case the child did not seem to be well nourished without it. The prepared milk seemed to do better without the added cream. I may remark that a larger amount of the soft curd may be worked through the sieve, provided it is found to digest well; if it does not digest well (as may be known by lumps of curd passing by the bowels, undigested), let most of it remain behind in the sieve or in the cloth. The difficulty does not arise so much from a difference in the quantity of casein as from the difference in quality. This fact has been pointed out by nearly all experimenters (see Sanderson: "Handbook for the Physiological Laboratory," vol. i., pp. 527–528).

The matter of using only one cow's milk is not of so much importance as is generally supposed.

In making my experiments, I sent to E. Schaffer, of Louisville, Ky., for a fresh sample of his saccharated pepsin, which I found to act well. One ounce, costing fifty or sixty cents, will make, at least, forty packages, each sufficient for one time of preparing. A sample package of ten grains can be weighed out by the druggist, which will be about as much as will lie on a nickel, possibly a little more. A short experience will teach any one how much to use; a little more or less will do no harm, provided it be enough.

Once in a while, from some cause, the milk will not curd as usual; then a little more pepsin must be added, and a longer time will be required.

The above table is a very fair guide as to quantity at the given ages, using the pepsinized milk in similar quantities, and dilute the same with water, or possibly a little less water if the curd is pretty well taken out. If the digestion is well performed, and yet the child does not thrive, an inquiry should be made concerning the quality of the milk. It need not come from one cow; but it should have a specific gravity of from 1,029 to 1,033, and should have from six to eight per cent. (volume, not weight) of cream.

A physician may be asked to take the specific gravity; but any one can ascertain the amount of cream. A glass tube (one of the long, slender lamp chimneys, about an inch in diameter) will answer. Cork up the end where the tube is of uniform diameter, and on the outside of the tube, from a point opposite the upper surface of the cork, measure four inches, and paste on a strip of writing-paper four inches in length, divided into inches, the upper inch again divided into twenty-five equal divisions. Fill the tube to the upper end of the strip of paper; set it aside carefully for twenty-four hours. Counting from the top downward, beginning with the second line, every line indicates one per cent. of cream, and is sufficiently accurate for ordinary purposes; at the same time it is a very excellent domestic test for the richness of milk. If the specific gravity is less than 1,029, the milk is either watery originally or has been watered; if the cream is less than six per cent., it is either poor originally in cream or has been partly skimmed. The above plan of treatment in many cases has given great satisfaction, being simple and within the reach of almost any one. In large cities mixed milk must generally be taken, but it should at least reach the above standard, especially in reference to the amount of cream. This method disposes of the indigestible part of the casein by retaining it in the strainer or sieve. I have in some cases added a *compound salt* to the milk, as recommended in the Prize Essay on "Artificial Feeding of Infants," by Dr. Oliver C. Wiggins, of Providence, R. I., awarded by the Trustees of the Fisk Fund, and published by the Rhode Island State Board of Health for 1879. It has, however, not answered well in my hands, though prepared with much care. In this whole matter simplicity is one of the great points toward success.

Heroic Treatment of a Snake-Bite.—The following item is going the rounds of the newspapers. The question arises whether the swelling of the arm was the result of the snake-bite or of the gunpowder treatment: "· · · Joe Ludlum, the idiot confined in the County Manual Labor Poor House, was bitten by a rattlesnake on the forefinger of the left hand, the fangs penetrating both sides of the finger. About three minutes after the bite was inflicted, Mrs. Symington, wife of the Superintendent, split the finger on both sides with a razor, poured a small quantity of gunpowder into the wound and set fire to it. She then applied ammonia, and also gave ammonia and whiskey inwardly to the man until he became drunk. This was a very brave act for the lady to do and it saved the poor man's life. On Sunday the hand and arm were swollen three times the natural size, but yesterday the swelling had gone down, and Ludlum is now all right again."

PRACTICAL EXAMINATION OF THE URINE FOR ALBUMEN AND SUGAR.[1]

By J. H. LINSLEY, M.D.,
BURLINGTON, VT.

The importance of urinary analysis in forming a correct diagnosis of disease is now so well understood and so universally conceded by the profession that not a word need be said upon this point.

To discuss fully and in detail the entire subject of the analysis of urine would far exceed the proper limits of such a paper as this, and I have therefore confined myself to that branch of the subject which is of most practical importance and interest, to wit: the "*practical examination of the urine for albumen and sugar.*"

The etiology of albuminuria and glycosuria I shall not discuss, but confine myself to the tests for albumen and sugar, and the reasons for preference of certain reactions over others.

ALBUMEN.

Albumen, when found in the urine, is either serum-albumen, paraglobulin, or both.

Urine containing albumen has, as you all know, generally a low specific gravity, though there are many exceptions to the rule, and every specimen of urine under examination should be tested for albumen *without regard* to the specific gravity, as a urine, *besides* containing albumen, *may* be abundant in sugar.

Heat test.—A small quantity of urine is heated in a test-tube. It should be clear before testing; if not, it should be filtered. The urine may be cloudy from the presence of amorphous urates, which disappear quickly upon the application of heat. If neutral or alkaline, it should be rendered feebly acid by the addition of two or three drops only of acetic acid, as in the presence of a free alkali an alkali-albuminate is formed, which is not precipitated by boiling. On the other hand, if nitric acid (or any of the strong mineral acids) are used, an *acid-albuminate* will be formed, which, in turn, is also not precipitable upon the application of heat.

Acetic acid, if in excess, may cause a cloudiness from the coagulation of dissolved mucus (mucine). If, after observing the above precautions, we have a faint cloudiness, or more dense opaqueness upon heating, we are positive of the presence of either albumen or the earthy phosphates. To distinguish between these two, we add a drop of nitric acid. If the precipitate clear up, the earthy phosphates form the cloudiness; if permanent, we have albumen present. The statement, found in some works on this subject, that the earthy phosphates are only precipitated when the reaction is neutral or alkaline, cannot be relied upon, as they will often form a precipitate upon heating when the reaction is feebly acid. By the test just mentioned we may form an approximate estimate of the amount of albumen in the following manner (Hofmann and Ultzmann): Fill a test-tube one-third full of clear, filtered urine, and heat, having the reaction feebly acid. A slight turbidity after heating, the urine still being transparent, with only a feeble opalescence, indicates a small amount of albumen, and only after long standing a light flocculent sediment forms. If the urine becomes cloudy by heating, and the albumen separates out as flakes, and a layer

[1] Read before the semi-annual meeting of the Vermont State Medical Society, June 7, 1882.

comes down on the bottom the thickness of a finger, then albumen is present in moderate amount. If albumen be precipitated in large lumps, and not, as in the other cases, near the surface of the fluid, but lower down, where the flame surrounds the test-tube, and appears to be of a creamy consistency, then albumen is present in great amount.

To compare the amount of albumen one day with another, we must boil a like quantity of urine in similar test-tubes, and compare the mass of the sediment after it has well settled.

In case there is some doubt as to the presence of a slight cloudiness in the sample of the urine boiled, it should be compared with an equal quantity of the same urine in a similar test-tube which has *not* been boiled, when the cloudiness, if present, is easily discernible.

Heller's, or the nitric acid test.—A test-tube is filled about one-half inch deep with C. P. nitric acid. Upon this about an equal amount of urine is allowed to float, the test-tube being held at an acute angle. (The urine can best be introduced by means of a pipette.) A white ring is formed at the junction of the two fluids by either of the three following substances: 1. Albumen; 2. Urates; 3. A resinous substance found in the urine after the ingestion of spirits of turpentine or balsam copaiva. To distinguish between the ring formed by the urates and that by albumen, we heat the mixture slightly, care being taken to hold the test-tube as quiet as possible. If due to the urates, the ring promptly disappears with little heat. Albumen is not changed. To distinguish between the resinous substance and albumen, we add a few drops of alcohol, when, if due to the above substance, the ring is immediately dissolved, while the albumen may be further precipitated.

The ring of albumen in all cases is sharply defined, and is not dissipated by the above means, while the ring formed by the urates is irregular, is formed higher up than the albumen ring, and shades off gradually into the urine above.

The two tests just given are *the* reliable ones. If the practitioner, after carefully applying them, fails to detect albumen, he may rest assured of its absence in the specimen under examination.

Often times a dark garnet-colored ring is formed at the junction of the nitric acid with the urine, which is not to be confounded with the ring formed by the substances just mentioned. It is due to a decomposition of some of the coloring matters by the acid.

In the test above given, if the zone is faint and feebly white, and has no lumpy appearance, but is nearly transparent, and only visible as a sharply defined line on a black background, it is safe to say albumen is only present in small amount (less than one-half per cent.), generally one-tenth per cent.

If snow white, opaque, and distinctly recognizable without the black background, and of a flocculent appearance, it is present in quantities varying from one-fourth to one-half per cent. But if it appear lumpy and flaky, and falls more or less to the bottom, and upon stirring with a glass rod becomes of a creamy consistency, then albumen is present in large amount; from one to two per cent.

Alcohol test.—By some observers the alcohol test is recommended, which consists of adding to a small quantity of urine, in a test-tube, about one-fourth its volume of alcohol (95 per cent.). If albumen be present we have a coagulation of the same. The objections to this test are, that besides albumen, alcohol precipitates oxalate of lime, probably the ammonio-magnesian phosphate, and a granular amorphous matter whose composition is unknown (Piffard).

Hofmann and Ultzmann.—Acidify strongly with acetic acid and add to the urine its volume of a cold saturated sodium sulphate solution, and boil. If albumen be present we have a white precipitate.

Neubauer and Vogel.—If a solution of albumen be treated with acetic acid until it has a strong acid reaction, and then a few drops of ferrocyanide of potassium solution added, a white flocculent precipitate is produced.

Carbolic acid test (Whittaker).—If a drop or two of strong carbolic acid be shaken up with the urine in a test-tube, if albumen be present the urine will turn milky. Precaution should be observed that too much acid is not added, as you are all familiar with the whitish appearance of a mixture of carbolic acid and water, if of sufficient strength.

Picric acid test (Gallipe).—Drop into a perfectly clear urine a cold saturated picric acid solution. If a white cloud form, then is albumen present. The cloudiness only lasts for a moment.

Chromic acid test (Thudichum).—When a small crystal of chromic acid is placed in a little normal urine, it dissolves without producing a precipitate. But in the presence of albumen the crystal produces a cloudy precipitate on its entering the fluid, and after its complete solution, all the albumen is precipitated in dark, reddish-brown flakes.

Albuminoid bodies treated with a solution of sulphate of copper and then warmed, after the addition of caustic potassa, or caustic soda, give the solution a beautiful violet color. This reaction does not appear, or only incompletely, when the alkali is added first.

Sugar and concentrated sulphuric acid produce a beautiful red color with all protein bodies, just as with the biliary acids.

Xantho-protein reaction (Legg).—The urine to be tested is boiled with nitric acid. If an albuminoid body be present the fluid becomes yellow, or a yellow precipitate is thrown down, and on cooling sodic hydrate, or aqua ammonia, changes the color to an orange-red.

Tannin test (Thudichum).—A watery solution of the purest crystallized tannin is to be used and should be prepared fresh for each testing. Healthy urine does not react with it. Albuminous urine gives a precipitate when brought in contact with it.

Neubauer and Vogel.—If albumen is heated with concentrated hydrochloric acid, or better, after the addition of a little sulphuric acid, a violet fluid results.

Equal parts of acetic and carbolic acids are recommended as a test for albumen.

Alum, corrosive sublimate, sulphate of copper, and tincture of galls, are mentioned as tests for albumen; also creosote, aniline, and other products of destructive distillation coagulate albumen (Thudichum).

The presence of albumen in a sample of urine is no *proof* of the presence of Bright's disease of the kidneys. *Every urine* containing albumen should be examined microscopically for casts, as the presence of these are needed to confirm our suspicions of this disease.

SUGAR.

When present in the urine, the sugar found is identical with grape sugar or glucose.

Normally the urine contains no sugar, some authors to the contrary notwithstanding. When present in diabetes mellitus, it is also found in the blood, vomitus, saliva, sweat, and, in fact, all the secretions and excretions.

Regular diabetic urine is generally of a pale or bright yellow color, large in quantity, acid in reaction, clear, and of a high specific gravity. In my own experience it has been the best looking urine I have had sent me for analysis.

To give all the tests for sugar, numbering, as they do, something over thirty, would require a great deal of time, besides being of little practical utility to the practitioner. I shall only mention some of the more prominent ones:

1. The most simple test is to boil down a quantity of the urine until the volume is reduced. Upon standing, the sugar separates from the solution in yellow, watery masses, which by recrystallization can be further purified.

Sometimes there is a sugar in the urine which is uncrystallizable and remains in a syrupy form.

2. The specific gravity alone, when 1030 or over, if the quantity of urine is over 1500 c.c. (50 fluid ounces) per day, and pale in color, affords a strong presumption of the presence of sugar.

In almost all of the following tests, if albumen be present, it must be precipitated by heat and removed by filtration.

3. *Moore's or Heller's test.*—One volume of urine is mixed with two volumes of liquor potassa and heated to boiling. If sugar be present, we have a color varying from a yellowish-red to a deep wine, according to the amount of sugar present. This test is the one most extensively used in Germany to detect the presence of sugar, and I consider it the best we have, as well as the simplest and most easy of application. The solution of caustic potassa should be fresh, as it might contain some lead from the glass, which would interfere with the test. Vogel suggests the following as a method of determining, from the more or less intense color produced by this reaction, the amount of sugar present:

If one prepare for himself solutions of grape sugar of different strengths, and make the tests with caustic potassa in tubes of the same size, he can easily form a scale of the percentage of sugar present, which will be fairly satisfactory. Treat two parts of each sugar solution with one part of caustic potassa, and heat to boiling. A one per cent. solution will be colored canary-yellow, a two per cent. solution dark amber, a five per cent. solution the color of dark Jamaica rum, and a ten per cent. solution becomes dark brown and opaque, while all solutions of less percentage are more or less transparent. As diabetic urine has a very light color, so by comparison with these solutions an approximative determination can be easily arrived at, with the help of the known specific gravity. If the urine is high-colored, it should be decolorized before applying *this* test, as well as Trommer's and Fehling's. To do this, put one or two ounces of the urine with half an ounce of animal charcoal into an eight-ounce vial, together with a pinch of carbonate of soda. Shake well for from five to ten minutes and filter; then carefully acidulate with acetic acid.

In performing this test it is well to fill the test-tube three-fourths full with the urine and liquor potassa, and heat the upper portion of it. In this way the slightest deviation in color may be easily noticed. The coloring matters of the bile, whether pure or decomposed, produce a brown color with caustic potassa, or caustic soda *without* the application of heat. We almost invariably get a precipitate in this test which is due to the earthy phosphate being thrown down by the alkalinity of the solution and heat.

4. *Böettger's test.*—This consists of adding to the urine in a test-tube enough carbonate of soda solution, caustic potassa, or caustic soda, to render the reaction distinctly alkaline, then about one grain (or a pinch) of subnitrate bismuth, and boiling. If sugar be present, the powder turns gray at first, and finally is reduced to the black metallic bismuth. Any of the sulphur compounds, if present, will also affect the reduction of the bismuth. To avoid this error, if we get a black precipitate, we take a second test-tube with the urine, and add as much oxide of lead as we did bismuth, first taking the precaution to render the reaction alkaline, as above stated. The litharge is only turned black by the sulphur compounds.

It is not affected by sugar. A simple gray color to the bismuth is no evidence of the presence of sugar; it must be black. This is an excellent test, and recommends itself to the physician on account of its simplicity.

5. *Mülder's test—Mülder-Neubauer, or Indigo.*—To a small quantity of urine in a test-tube we add enough of a solution of indigo to give the fluid a rather deep blue color, and then add enough sodic carbonate solution to render the reaction distinctly alkaline, and heat without shaking. If sugar be present, the color changes to a greenish, yellowish-red, red, yellow, and finally is almost entirley discharged.

Upon shaking the mixture up in contact with air, the blue color again returns. Upon standing, however, the solution eventually becomes almost colorless. If the amount of sugar be very small, the color becomes only a pale blue. This is a very good confirmatory test for sugar.

6. *Fehling's test.*—This is one of the best tests we have for sugar, its only disadvantage being the time and trouble experienced by the practitioner in preparing the solutions, especially if they are to be used for quantitative estimation, and their proneness to decomposition by long keeping. As you well know, two solutions are required, called, respectively, No. 1 and No. 2. The No. 1 solution is made by dissolving 51.98 grains of pure sulphate of copper in 500 grains of distilled water. No. 2 solution is prepared by dissolving 259.9 grains of pure crystallized Rochelle salt in a solution of caustic soda (specific gravity, 1.12), whose volume is equal to that of 1,000 grains of distilled water. One volume of No. 1 mixed with two volumes of No. 2 constitute Fehling's solution, 200 grains of which equal 1 grain of sugar (20 c.c.=0 1 d.g.) (Piffard). To use the above for qualitative work, we put a small quantity in a test-tube, dilute with about one-half its volume of water, and boil. If any change occur in the mixture upon being heated, the Fehling solution is worthless.

After the solution has boiled, and if it remains unchanged, we add two or three drops of the urine to be tested. If there be a considerable quantity of sugar present, the addition of the first few drops will be followed by a bright red precipitate of the suboxide of copper and this occurs after the addition of each succeeding few drops of the urine, until all the copper is reduced. It should not be concluded that sugar is absent from the urine till a volume of urine has been added in the above manner,

equal in bulk to the amount of Fehling's solution used. A good way to bring out the difference in color between the red suboxide of copper and the unchanged copper in solution is the following, recommended by Blitz: Mix with Fehling's liquid a concentrated sodium chloride solution, heat to boiling, and carefully add the urine to be tested.

The strong sodium chloride solution prevents a mixture of the two liquids, so that at their point of contact the red coloration appears with great distinctness.

If the urine should contain a *large* amount of sugar, it should be diluted before applying the copper tests.

7. *Trommer's test.*—This test is, I am sure, perfectly familiar to you all; yet, as it is the test most generally used in this section of the country, and one of the most unreliable ones, I shall give the method of its application and point out some of its defects.

To a small quantity of urine in a test-tube enough of a solution of sulphate of copper is added, drop by drop, to give the mixture a pale blue color. We then add about half the volume of liquor potassa and heat. If sugar be present, we have a precipitate of the red suboxide of copper.

In a concentrated urine we often get a red coloration, and always a precipitate of the earthy phosphates when present, which has many times been mistaken for the change in color due to the presence of sugar. If we bear in mind that this precipitate itself is never colored red, except by sugar, we remove the possibilities of a very grave error.

An excess of sulphate of copper is to be avoided, as if present we may have the formation of the black cuprous oxide. Sometimes the liquid changes color from blue to yellow; this occurs in the presence of small quantities of the cupric salt and large quantities of sugar, the cuprous oxide being held in solution by the excess of glucose (Witthaus).

The objections to this test are the following: Uric acid, sarcosin, mucus in excess, albuminous matters, especially peptone, kreatin, kreatinine, and pepsin, urinary coloring matters, and some other substances interfere seriously with the test. On this account it is much better to rely on tests whose sources of error are slight as compared to those of Trommer's.

8. *Fermentation test* (Witthaus).—We take three test-tubes, marked *A*, *B*, and *C*. In each place some washed yeast. Fill "*A*" completely with the urine under examination, and invert it, with the mouth below the surface of some of the same urine in a flat vessel. (To keep the air from entering the tube during its inversion, we place a finger over the mouth and hold it there till the open end of the tube is below the surface of the urine.) Fill "*B*" with some urine to which glucose has been added, and "*C*" with distilled water, and invert them in the same manner as "*A*"; "*B*" in saccharine urine and "*C*" in distilled water. Leave all three tubes in a place where the temperature is about 70° F., for twelve hours, and then examine them. If gas has collected in both "*A*" and "*B*," and none in "*C*," the urine contains sugar. If no gas has collected in "*B*," then the yeast is worthless; while if any gas is found over "*C*," then the yeast itself contains carbon dioxide (CO_2). In the two last cases the process must be repeated with a new sample of yeast.

9. *Roberts' fermentation test.*—This test is a quantitative one, and depends upon the loss in weight of the urine from fermentation.

Two flasks are filled with urine; one of these is tightly corked; the other, after the addition of some washed yeast, is fitted with a cork having grooves cut in the side, to allow the escape of carbon dioxide. Both are then placed in a temperature of 70° F. for twelve hours. At the end of this time the specific gravity of both are taken, and for every degree of specific gravity lost in the sample containing the yeast, Roberts calculates one grain of sugar to the ounce of urine.

This test is highly recommended by some writers and denounced by others. It has the disadvantage of occupying some time for its application, as well as the difficulty of always obtaining fresh yeast.

10. *Neubauer and Vogel.*—To a small quantity of urine in a test-tube we add a little weak ammoniacal solution of nitrate of silver, and boil for some little time. If sugar be present, we get a deposit of metallic silver, in the form of a polished mirror, on the bottom and sides of the test-tube. A good way to conduct this test, and one which I am in the habit of using, is to add to the urine a drop or two (according to its strength) of a solution of nitrate of silver, then enough aqua ammonia to clear up the thick, white, curdy precipitate of chloride of silver, and heat.

It must be borne in mind that tartaric acid, and some other matters, give the same reaction with this solution as glucose.

The test is chiefly important as a confirmatory one.

11. *Piffard's Cupro-potassic paste.*—This is prepared by taking of sulphate copper C. P., 1 part; crystallized Rochelle salt, 5 parts; sodic hydrate, 2 parts. Mix thoroughly in a mortar. The result will be a pasty mass which can be put in a wide-mouthed vial and kept till wanted. To use it, we take of the mass a piece about the size of a small pea, put it in a test-tube, add about two drachms of water, and boil till the mass is dissolved.

The solution has then a uniform pale and rather dirty blue color; we then add two or three drops of the suspected urine and boil again for a moment. If sugar be present, we have the usual reaction of the copper reduction tests.

12. *Pavy's solution for quantitative estimation.*

Take of Cupric sulphate.....	320	grains.
Neutral potassic tartrate.	640	"
Caustic potassa.....	1280	"
Distilled water	20	fl. ounces.

Mix.

The solution is made in the same manner as Fehling's, and 100 minims correspond to ½ grain of grape sugar. If wanted simply for qualitative work, it may be made by pounding together 5 grains cupric sulphate, 10 grains neutral potassic tartrate, and dissolving in 2 drachms of liquor potass. The usual blue fluid results. To use, we put a small quantity of the test fluid in a test-tube, dilute with four or five times its bulk of water, and boil. If upon boiling the solution remains clear, we then add the suspected urine, drop by drop, when if sugar be present, after the addition of a few drops, we have the red precipitate of the suboxide of copper. If a precipitate occur in the solution before the addition of the urine, it must be discarded, as it is worthless. The Pavy's solution, if kept for some time exposed to the light, deteriorates in the same manner as Fehling's.

13. *Tungstate of ammonium test* (Neubauer and Vogel).—We add to the urine a little caustic potassa solution, and then a few drops of molybdate, or tung-

state of ammonium, and heat to boiling. Then carefully acidulate with hydrochloric acid, when, if sugar be present, we have a beautiful blue color. My experience with this test is limited, but I hardly think it will commend itself to the physician, on account of the trouble found in obtaining the preparation of ammonium.

14. *Polarization test.*—Grape sugar rotates the plane of polarization to the right, and is therefore called dextrose. This method for the detection of grape sugar is one which can only be employed in a well-appointed laboratory, as a polarizing apparatus is a very costly affair, and one which it would be rare to find in the office of a practitioner.

15. *Campani's test.*—If one or two drachms of a copper acetate solution be heated to boiling in a test-tube, and urine containing sugar slowly added, the copper will be reduced to the red cuprous oxide—a one-half per cent. of sugar will cause a red coloration at the point of contact, and a one-tenth per cent. cause a yellow coloration.

16. *Knapp's method.*—This is performed by boiling an alkaline solution of mercuric cyanide with the urine under examination. If sugar be present, the cyanide is completely reduced to metallic mercury.

17. *Dr. L. S. Oppenheimer's test.*—The following solution is required for this test:

℞ Cupri sulphas..... gr. j.
Glycerinæ..... ʒ j.
M.

One drachm of this mixture will reduce one grain of grape sugar in the presence of a caustic alkali.

Two or three drops of the solution are put in a test-tube, and one-half ounce of liq. potassæ added; the whole is then boiled, a few drops of urine are added, and the whole boiled again. If sugar be present, it will be thrown down as the brownish-yellow cuprous oxide. It is claimed for this test that it is surer than Trommer's, it can be used to determine the quantity of sugar, and that albumen does not interfere with its working. The mixture will *not* keep indefinitely.

I believe this is one of the latest tests that have been given for sugar, as I have never seen it mentioned in works on uroscopy, and it has only lately appeared in the periodicals. I have not yet had time to investigate as to the value of this reaction, but if all is true that Dr. Oppenheimer claims for it, I cannot see why it should not be one of the very best tests we have at our command.

18. *Bouchardat's test.*—This test is supposed to be applicable to the urine even in the presence of albumen, and is as follows: Take fifty cubic centimetres (3x.) of urine and add to it a heaping teaspoonful of slaked lime. Boil over an alcohol lamp or a Bunsen burner. If there is sugar in the urine it acquires a yellow or dusky hue, according to the quantity of sugar present. If there is but little sugar present there is simply a brownish hue.

When the oxide of several metals, as copper, mercury, silver, gold, or bismuth, in the form of salts, are brought in contact with solution of grape sugar at high temperatures, a reduction of the oxide to a lower oxide, or to the metal, takes place.

The great value of knowing several of the different tests, for both albumen and sugar, is to enable the practitioner, when suspicious of the presence of one or the other of these substances, to apply several reactions to the same specimen of urine, whose coincidence will establish the fact of the presence of albumen or sugar in that urine, or whose entire failure to agree will prove the absence of the same.

Before closing, I wish to impress on the minds of the members of this Society the *great* importance of the examination of the urine in *every* case of sickness or deviation from health, and *more especially* in cases where the *slightest* doubt as to the diagnosis exists.

Even though, by an examination of the urine, we are unable to throw any light on our case, still we have one satisfaction: that of being able to exclude the kidneys from participating in the trouble. In my humble opinion, a council should never be called (except in cases of emergency) without first having had a full analysis of the urine made. This may to some seem unnecessary, but when we consider that the slightest febrile action, or catarrh, changes, to a more or less degree, the normal composition of the urine, we find a ready excuse for being so particular.

Reports of Hospitals.

NEW YORK HOSPITAL NOTES.

SERVICE OF DR. WILLIAM H. DRAPER.

ABNORMALLY LOW TEMPERATURE FROM COLD.

THE patient was a male, about forty-five years of age. No history. Was brought in on the morning of January 23d, comatose and pulseless, having been found in this condition in a hallway. It was not known whether he had been drinking. At 6 A.M. pulse was 42; respiration, 13; temperature, 87°. Coma complete; patient could not be aroused therefrom. On examination, patient was very thin, poorly nourished, and both legs were œdematous and swollen. Feet icy cold and blue. There was slight automatic movement of the left arm. Respiration slow and weak; breath not very alcoholic; no cardiac impulse. The radial artery was pulseless, and had the feel of a cord; the femoral gave a slight feeble pulse. Pupils not dilatable. Conjunctiva still sensitive, giving slight reflex in the eyelids. Otherwise all response to reflex excitation completely lost. The skin over the entire body was dry and cold to the touch. Patient had several large and protruding hemorrhoids. Urine dark-colored and scanty; one and a half drachm drawn by catheter contained amorphous urates and albumen.

Patient was immediately sponged with tepid mustard-water, and placed in the hot bath, with hot bottle applied to the feet. Spts. vini. gall., ʒ j., and digitaline, gr. $\frac{1}{44}$, given. At 9 A.M. respiration was somewhat improved, and pulse better. A vigorous slap on the cheek now brought reflex action. At 12 M. temperature 85°, taken in the rectum and urethra. At 1 P.M. patient could be aroused; sensibility had returned to a certain extent. The insertion of the hypodermic needle gave rise to pain. At 1.30 P.M. ether and spts. vini. gall. given; also digitaline, gr. $\frac{1}{24}$. At 2 P.M. temperature in the rectum 93°. Instances on record of collapse from severe injury, hemorrhage, etc., gave even a lower rectal temperature than the 85° obtained in this case, but Dr. Draper had never before seen such a low temperature as this from cold. At 3 P.M. patient was still in the hot-air bath. Though partially comatose, he was so far restored as to be able to respond

when spoken to, but immediately subsided into a state of unconsciousness. Some reflexes had also returned, and there was considerable tossing about of the arms and occasional muttering.

Treatment.—The main reliance was in alcoholic stimulation and digitalis.

The patient died on the same night. Autopsy showed fatty liver, with renal disease.

RARE CASE OF CHYLOUS URINE.

The patient was a male, aged thirty-seven. Admitted February 8th, and giving the following history: Is a native of the West Indies; inheritance good. When seventeen years of age he was thrown from a horse. Did not strike the head, but sustained a severe injury of the right side. This brought on a severe cough with expectoration, and patient lost in health. A few months later he took a trip to Copenhagen. During the first three weeks of the voyage he was very sea-sick, and had several boils. At the end of that time he was suddenly troubled with difficult micturition. He then passed a small hard lump, followed by milky urine. The patient has never had stricture or gonorrhœa. During the rest of the voyage he improved considerably in health and gained flesh, but continued to void milky urine. In Copenhagen he immediately obtained medical treatment, and urine soon returned to a nearly normal condition. He then had an attack of scarlatina, after recovering from which he passed normal urine. Patient returned to the West Indies, and remained in good health for several years. In October, 1871, while out walking, he was suddenly compelled to urinate, and after much difficulty a hard viscid lump was passed, coming away with such force as to adhere to the fence against which it was projected with the stream of urine. This was again followed by milky urine, which continued for three months. He then had phlebitis of the right leg.

In May, 1872, patient took nitre, etc., and had his bladder washed out three times a day, with very little relief. Urine continued more or less milky up to 1874, when patient came to this city. In May, 1874, he passed another lump. This was again succeeded by milky urine. Was treated, but derived no benefit.

In June, 1875, patient again obtained medical advice. At times small quantities of soft coagula would pass from the bladder, often causing extreme retention and suffering, which was only relieved by the hot bath, opium, etc. At intervals he would pass hard lumps similar to the ones mentioned. At this time his urine, shortly after being discharged, would coagulate into an opaque, jelly-like clot. Urine was always acid, albuminous, coagulable by nitric acid, and contained oil, eight grains to the ounce. Under treatment patient rapidly improved. Oil of turpentine increased the urine, diminishing the amount of oil. In three weeks urine was very much better, and soon became natural. Patient does not drink to excess. Bowels relaxed; appetite capricious. He has taken large doses of morphia and chloral. Six weeks ago several sores appeared on the buttocks, made worse on lying down. Patient never had yellow fever.

Dr. Draper remarked that the history was typical of a rare disease, one which for years was unexplained. The patient had recently had a recurrence of his trouble, and the fluid now passed was an excellent specimen of chylous urine. It had an opaque, pinkish-white appearance, and was of the consistency of ordinary milk. It was mixed with the contents of the blood-vessels as well as those of the lymphatics.

Sometimes, and especially on standing, instead of its constituents being evenly disseminated as in a specimen just drawn, a tremulous mass subsided to the bottom of the glass. This again broke up, furnishing a creamy scum which rose to the surface, and a pinkish or brownish sediment.

Examined microscopically, the urine was found to contain, besides the usual ingredients, a substance which in all respects was similar to chyle, and composed of oil and fibrin, but always mixed with pus, often with blood.

Sometimes partial coagulation took place within the bladder, and the resulting masses caused serious retention.

This affection was formerly supposed to be due to a rupture of the lymphatic vessels of the urinary organs. Dr. Bilharz, of Cairo, was the first to describe this kind of urine; hence the Bilharzia hematobia.

It was afterward found that the disease was dependent on the presence of a microscopical blood-worm, which existed in innumerable quantities in the circulating fluid. It had previously been discovered in the urine in hematuria and chyluria, but its presence in the blood was first noticed by Dr. Lewis, of India, in 1872.

In this case, since admission, his blood had been examined, and his worm, the *filaria sanguinis hominis*, had been found in large numbers. A curious fact connected with it was that the worm is only developed during the night. But if the patient (as has been shown in this case) was, by work or otherwise, deprived of sleep at night, obtaining his rest during the day, the filaria was then only found in the daytime and not at night; *i.e.*, its presence was noticed only during the periods of sleep.

Another strange feature was that the mosquito sucks these animals (by preference) from the blood. Greater numbers were found in a certain quantity of blood drawn by the mosquito than in the same quantity in the circulation. These were evacuated in a condition capable of communicating the disease to another (through drinking-water).

The worm varied in length from $\frac{1}{150}$ to $\frac{1}{36}$ of an inch, and was about $\frac{1}{3500}$ of an inch in diameter.

The mechanism of the production of chylous urine consisted ultimately in the formation of minute openings in the urinary tract, in communication with the lymphatics, and in this way establishing chylous fistulæ, which give rise to the phenomenon of chylous urine.

The subjective history showed that the patient had suffered from this disease for the past twenty years, but during this period he had had several intermissions of apparent health. Whether during these intermissions the filaria had disappeared from the blood or remained in the system, it was impossible to say. The latter was probable.

The patient was taking oil of turpentine, gtt. xx. t.i.d.

ANTIPYRETICS, ETC., IN TYPHOID FEVER.[1]

The fever in typhoid is naturally a very exhausting one. The patient emaciates rapidly, because of the active combustion of the tissues, due to the high temperature. When the fever is at its height, the patient usually assumes the dorsal decubitus, and

[1] Clinical Lecture by Dr. William H. Draper. Delivered at the New York Hospital, February 2, 1882.

shows all the signs of supreme exhaustion. There is no muscular movement, no expression in the features, but a vacant and dull look. Sordes collect on the lips, teeth, and nostrils.

The fever is simply the using up of the patient, consuming the energy that is set free. Hence, for each degree of reduction the danger is correspondingly lessened. To reduce the temperature is, therefore, the most essential feature.

Proper adjustment of the clothing, proper attention to food and drink should always receive careful attention. Besides their cooling effects, drinks also facilitate peristalsis, and assist in removing matters produced in the retrograde movement. It may even be necessary to act on the bowels to depurate the system of these effete materials.

Rest.—Rest is absolutely essential. The patient should be protected from any source of irritation, and there should be no muscular movements whatever. This should be insisted upon, as patients often exhaust themselves greatly during the early stages of the disease, and thus lessen materially their chances of recovery.

Diet.—A milk diet is the best in the great majority of cases. Some patients cannot take a purely milk diet for a long period. In such instances animal broths may be given. But these must be fluid, concentrated, and rich in all the elements of animal fibre, and not merely a solution of a few salts with extractive matters.

Quinine.—Extraordinarily large amounts of this drug are needed. The striking effect of quinia shown in this patient cannot be looked for in small doses. In other fevers, *e.g.*, malarial, surgical, etc., quinine thus administered exerts its specific power, but moderate doses in typhoid fever produce no such effect.

Alcohol.—In regard to alcohol as an antipyretic in typhoid fever, and in fact all high grades of temperature from any cause, there can be no question of its ability. Alcohol is an antipyretic in that it does reduce the temperature. At the same time its action in fevers is explained not only by its antipyretic effect, but also by its stimulating and supporting the heart, and by supplying something, a "food," out of which force is eliminated for the vital functions. Hence its utility in fevers. It is a very unstable hydrocarbon, and is, therefore, very combustible. In the body it has the same combustibility, and thus eliminates energy and obviates the loss and exhaustion resulting from the combustion of the patient's tissues. The same would obtain of any food, the latent force becoming the active energy of the body.

One of the most striking effects of alcohol is the almost utter impossibility to intoxicate in high fever. When alcohol circulates in the blood, when it produces its specific effect, it intoxicates. But when consumed like any other food, this specific action is not shown.

The power to digest alcohol varies in different persons. In some a teaspoonful may cause intoxication. Others take large quantities in health and experience no effect whatever. This is principally due to a greater power of digestion for alcohol. The same is found even for ordinary foods. In febrile conditions, however, the ability to consume is uniform. In typhoid and similar fevers a patient will take large quantities of alcohol (even a quart of brandy in twenty-four hours) without any of the usual symptoms of alcoholism, any of the cerebro-spinal effects, or even any odor upon the breath. Also, the patient is not only not rendered delirious but the delirium is quieted by alcohol; he thus obtains possession of his senses by those means which under other circumstances would deprive him of them. This action of alcohol is of specific value, not only in typhoid but in all fevers, and at all ages. Even infants are able to tolerate doses in fever that would otherwise set them wild.

There is only one explanation of this. Alcohol being very combustible is oxidized and split up by the fever into its elements, H_2O and CO_2, water and carbon dioxide, thus by its decomposition liberating its potential force and saving combustion of the patient's tissues.

The feeding of fever, therefore, constitutes one of the most important elements in its treatment. For this purpose alcohol as a food is most easily disintegrated and yields most readily its power. Hence it is indicated in all continued fevers when the patient is suffering from the effects of combustion.

Alcohol also stimulates the nervous centres. The heart becomes more steady and firm, and the first sound, which may have been feeble or absent, becomes distinct. By its stimulating effect it will also quell the delirium and control the locomotor disturbances. In the use of alcohol in fever, it is important to bear in mind the indications for its administration.

Alcohol is required when the patient exhibits symptoms of great nervous prostration, with subsultus, delirium at night, jactitation, with a position in bed indicating great physical debility, and a very dry tongue; all coming on with the increase of temperature.

If alcohol be administered it will quiet the delirium and the locomotor derangements; the patient will sleep quietly, the tongue will become moist, and the whole aspect of the case will be changed for the better. If, however, it increases the frequency of the pulse, if the delirium becomes more active, the tongue more dry, the skin hot and parched; if the motor spasms, tremulousness, subsultus, and restlessness are aggravated by alcohol, it is doing harm.

In all cases it is important that the temperature fall and the pulse become less frequent until regulated from one twelve hours to another. In regard to the administration, the potent property lies in the amount of alcohol. Brandy or whiskey is preferable to fermented preparations. It is exceedingly desirous to prevent anything like fermentative dyspepsia, hence wines and especially beer should be avoided. Old wines were thought to be excellent. Alcohol does the good, however, and the simplest way is the best. It is best taken with the food; given with milk it is thus diluted and rendered bland.

The amount of alcohol to be administered varies with the patient. This consideration needs careful and intelligent observation of the symptoms. There is no strict law. It should be given until the desired effect is obtained. The amount usually ranges from ℥iv. to ℥xxiv. But in the majority of cases it will be necessary to give the largest quantity in the twelve hours from 6 P.M. to 6 A.M. During this period all the vital powers, the respiration, pulse, and temperature reach their lowest. Therefore the greatest failure in these hours need the greatest amount of stimulation.

In typhoid fever many symptoms may arise which require special attention. Insomnia may be exceedingly distressing, and, as a rule, opium may be used in moderate doses. It not only produces sleep

at night, but helps the patient to bear the exhaustion.

Diffusible stimulants, ammonii carbones, etc., may also be needed. Digitalis may be necessary to help tide over the dangers.

MANAGEMENT OF THE ACCIDENTS IN TYPHOID FEVER.

Certain complications may occur in the course of typhoid fever. The principal accidents which may imperil the patient are (1) congestion of the lungs; (2) perforation of the intestine; (3) perforation of a blood-vessel. All these require special attention.

1. Cough is almost always present, dependent upon a moderate degree of bronchial catarrh. There is always more or less congestion at the base of the lungs, owing to the feeble circulation, the dorsal decubitus, the weakened muscular fibres, and shallow breathing. A good plan is to have the patient sit up for a while, or change his position, in order that by forced inspiration the lungs may become more inflated than otherwise. It is always necessary to increase the force of the heart's action. Oil-silk jackets may be used, or the patient can be wrapped in cotton. If the bronchitis is severe, dry cups should be applied.

2. The symptoms of intestinal perforation are acute pain, accompanied by rigors; a sudden prostration, and a very remarkable degree of collapse. This accident makes the prognosis more serious. It is possible to produce a reaction sufficient to set up a peritonitis; nevertheless, as the patient is in a state of collapse and in immediate danger, stimulants and opium are indicated. Opium has a most beneficial effect on the heart, and should at once be given hypodermically, to insure a speedy effect. There is no use in applying leeches, blisters, etc.

3. Blood in the stools, indicating that a blood-vessel has been perforated by one of the ulcerating Peyer's glands, is a grave and serious symptom. Absolute repose should be obtained, and the diarrhœa, and even the patient's desire to defecate, be controlled if possible. Opium is, therefore, indicated. Styptics should be administered per anum. These do no good by the mouth, as the lesion is situated so far down the intestine.

PUSTULA MALIGNA—TREATMENT BY IODIZED INJECTIONS.—Dr. Poladura, in *La Revista de Medicina y Cirugia Prâticas*, relates the following case of malignant pustule, apparently cured by the hypodermic use of iodine. The patient was a shepherd, aged forty-one, of sanguineous temperament and good constitution. Five days before he was seen, he presented the local and constitutional signs of malignant pustule of the face. The treatment consisted in incisions, excisions, the actual cautery, and antiseptic and emollient applications. During the next two days following, the œdema and induration had attained such a degree as to constitute a veritable monstrosity; the temperature was 40° C., and there was vomiting and great prostration. Tincture of iodine was given internally, and antiseptic applications continued. Ten hypodermic injections of a two per cent. solution of tincture of iodine were administered around the zone of induration. Subsequently the symptoms became aggravated. Injections were again practised in various locations in the œdematous region. The next day the delirium, as well as the sweats and chills, had disappeared, and the pulse was stronger. An inflammatory circle was visible at the margin of the eschar. Treatment being continued, a cure resulted.—*Rev. de Ciencias Med.*, June, 1882.

Progress of Medical Science.

GLUCOSE AS A DIURETIC.—Dr. Vandani (*Gazetta Médica di Torino*) has made a series of observations in regard to the diuretic action of glucose, introduced per rectum or subcutaneously. The following are some of the results obtained:

Observation I.—Muscular rheumatism. Woman, aged twenty-four. May 24th, enema of glucose, twenty-three per cent.; urine in twenty-four hours, 2,620 c.c. May 24th, enema of glucose, twenty-five per cent.; urine in twenty-four hours, 2,620 c.c. May 25th, no treatment; urine in twenty-four hours, 1,850 c.c. May 26th, no treatment; urine in twenty-four hours, 1,810 c.c.

Observation II.—Facial erysipelas. Woman, aged seventeen. May 23d, no treatment; urine not measured. May 24th, no treatment; urine in twenty-four hours, 1,320 c.c. May 25th, two enemata of twenty-three per cent. of glucose; two enemata of twenty-eight per cent. of glucose; urine in twenty-four hours, 2,705 c.c. May 26th, no treatment; urine in twenty-four hours, 2,010 c.c. May 27th, no treatment; urine in twenty-four hours, 2,220 c.c. May 29th, no treatment; urine in twenty-four hours, 1,340 c.c.

Observation III.—Bronchitis. Hysterical woman, aged seventeen. May 23d, two enemata, twenty-five per cent.; two enemata, twenty per cent.; urine in twenty-four hours, 4,145 c.c. May 24th, no treatment; urine in twenty-four hours, 3,625 c.c. May 25th, no treatment; urine in twenty-four hours, 2,775 c.c. May 26th, no treatment; urine in twenty-four hours, 2,100 c c. May 27th, no treatment; urine in twenty-four hours, 2,050 c.c.

Observation IV.—Anchylolostoma, anæmia. Man, aged forty. June 11th, no treatment; urine in twenty-four hours, 1,615 c.c. June 12th, three enemata, seven per cent.; urine in twenty-four hours, 2,400 c.c. June 13th, no treatment; urine in twenty-four hours, 1,910 c.c. June 14th, no treatment; urine in twenty-four hours, 1,490 c.c.

Observation V.—Mitral insufficiency. Woman, aged sixty-five. June 7th, no treatment; urine in twenty-four hours, 885 c.c. June 8th, eight subcutaneous injections, seventy per cent.; urine in twenty-four hours, 1,325 c.c. June 9th, no treatment; urine in twenty-four hours, 870 c.c. June 10th, nine injections, seventy per cent.; urine in twenty-four hours, 1,405 c.c.

Hypodermic injections seem to be preferable to enemata, on account of their more certain action. Clysters are often ineffective because unfavorable intestinal conditions do not permit absorption.—*La Indep. Med.*, June, 1882.

SUBCUTANEOUS EPHEMERAL NODOSITIES OF RHEUMATISM.—MM. Troisier and Blocq (*Revue Mensuelle de Médecine*) publish an interesting instance of this rare affection, as described by Froriep and Jaccoud. It manifests itself in the following manner: Small subcutaneous tumors appear, sometimes as elevations more or less marked, and sometimes only discoverable on palpation. In shape they are spherical or ovoid, and ordinarily well circumscribed. Their volume is variable; it is commonly compared with that of a grain of wheat, a lentil, a pea, or a hazelnut. They offer a peculiar resistance to the finger; they are firm and rather more elastic than hard. They are more or less movable under the integu-

ment to which they are generally non-adherent. Most frequently they are but little sensitive to pressure, but pain is sometimes experienced. They may appear upon any portion of the body, either in the neighborhood of joints, remote from the diseased articulations, as on the head (they occupy by preference the frontal and occipital region), or may be met with upon the ear. Their number is very variable; they often appear in successive crops. Their evolution is altogether characteristic; they develop rapidly, and in short time acquire their largest dimensions; they disappear after a number of hours or days without leaving a trace. In the observation detailed by MM. Troisier and Blocq the affection showed itself during the decline of an attack of acute articular rheumatism. M. Féréol states that on several occasions, during fifteen years, he has seen these superficial nodosities in a lady. They were formed from day to day, and appeared upon the forehead. They presented themselves as rounded eminences, of elastic hardness and regular contour. They caused no discoloration of the skin, and were not sensitive even to strong pressure; they were unaccompanied by itching, pricking, or heat. These nodosities, which vary in size from a hazel-nut to a pea, were never very numerous; sometimes there was one, sometimes there were two or three, never more. When there were several of them they were unequal and situated at different levels without symmetry. These nodules appeared upon the patient's awakening. They originated during the night without producing any malaise. In fifteen years this phenomenon was repeated twenty-five to thirty times. The lady otherwise enjoyed good health. She was descended from an arthritic family. She had never had rheumatism up to date, but was suffering from a rebellious pityriasis of the scalp. She was also subject to migraine, appearing about once a month. It was impossible to connect the appearance of these nodosities with her menstruation, but it appeared to bear a relation to the migraine, with the attacks of which it often coincided. M. Féréol, who has observed other analogous cases, made a report of the subject to the Scientific Congress of 1879. It is difficult at present to state precisely the anatomical seat of these tumors. M. Troisier supposes them to be developed in the fibrous tissues—periosteum, ligaments and aponeuroses—and sustaining to the subcutaneous connective tissue only the relation of contiguity.—*Journal de Médecine*, January, 1882.

Sulphocresylate of Sodium.—A year ago, M. Rabuteau announced that the sulpho-phenate of sodium was an energetic purgative, and could be kept unchanged in solution. M. Rabuteau now brings forth the sulphocresylate of sodium. Cresylic alcohol (C_7H_7) HO may be derived from tar; treated with sulphuric acid it yields sulphocresylic acid (C_7H_7) H SO_4. This acid has a saline taste. Treated with perchloride of iron it strikes a beautiful violet color. Six grammes of this substance have been ascertained to produce no effect upon a dog of medium size.—*La Tribune Médicale*, June 25, 1882.

Rhinophyma.—Hebra (*Vierteljalisch für Dermatologie und Syph.*) has excised specimens in two cases of rhinophyma and examined them anatomically. The peculiarity of the neoplasm consists in the fact that it represents only the normal constituents of the skin, but in abnormal proportions. The epidermis and rete malpighi are not changed. In the cutis, on the other hand, there is a very marked increase in size of the connective tissue fibres, the sebaceous glands are enlarged, and are composed of a greater number of lobules, and many dilated vessels are visible. The fibres included between the glandular lobules contain young nucleated connective tissue. The author regards them as primary in the neoplasm, in so far as they are true formative elements.

The process is, therefore, to be considered as a hyperplasia of the skin in all its parts, with the exception of the epithelial structures covering the derma. It is to be differentiated from elephantiasis arabum, which is always accompanied by inflammatory phenomena and chronic œdema. On the subject of operative procedures the author only alludes to the statements of Sennert and Chausit. In cases operated upon, some by his father, some by himself, everything deforming the nose was simply removed, without covering the loss of substance. Recovery was always complete. Hemorrhage during this procedure is intense, and to it is often due, the author acknowledges, the failure to complete the operation in one sitting. Hebra might have overcome this difficulty if he had known the galvanocaustic method of Bröer. By this means two cases were treated at the Clinique at Breslau without loss of blood, and with complete success.—*Centrablatt für Chirurgie*, June 24, 1882.

Operative Procedures in Carcinoma and Adenoma Uteri.—In describing a case of adenoma of the uterus, Rokitansky (*Allg. Wiener med. Zeitung*, 1882, No. 13) takes occasion to express his views generally in regard to operations for carcinoma uteri. According to him, the prognosis in this disease is absolutely unfavorable. Scraping and subsequent injection of fuming nitric acid might afford amelioration for a time, but recovery was impossible. Rokitansky is a decided opponent of total extirpation of the uterus. It occupied a position analogous to that of transfusion. When the latter was indicated, it was without avail; when performed without necessity, it was of course superfluous. The patient gained nothing by a total extirpation of the uterus. When other surgical procedures seemed fruitless or inexpedient, where less severe operations were capable of removing the diseased tissue, total extirpation would seem an inhuman measure, jeopardizing the woman's life. The prognosis of adenoma was favorable, but carcinoma was not infrequently developed from it. For scraping out the uterus, Rokitansky prefers the curette to Simon's sharp spoon. The patient is placed on the left side. He begins with the most delicate curette of the thickness of an ordinary uterine sound, and gradually employs the larger ones. He never enlarges the cervix previous to using the curette. In decided flexions of the organ, he inserts a tenaculum into the cervix, and overcomes the deformity by traction. Only in very sensitive persons would narcosis be found necessary.—*Centralblatt für Gynäk.*, June 24, 1882.

The Ergotine Treatment of Uterine Tumors.—In the July number of the *New York Medical Journal and Obstetrical Review* Dr. William T. Lusk, Professor of Obstetrics in Bellevue Hospital Medical College, relates a case of fibro-myoma of the uterus in which ergotine injections into the subcutaneous tissue of the abdominal wall over the tumor, not into the tumor, resulted in a rapid diminution in the bulk of the growth, at the expense, however, of gangrene of the compressed tumor, ending in fatal septicæmia.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, August 19, 1882.

CONCERNING COTTAGE HOSPITALS.

Dr. Lucius W. Baker, of Baldwinsville, Mass., in a paper read at the recent meeting of the Massachusetts State Medical Society, very strongly advocates the establishment of cottage hospitals in different parts of his State. The idea is a good one, and deserves due consideration on the part of the profession who practise in rural districts. Not only in Massachusetts, but in every other State in the Union there is a great scarcity of hospital accommodation outside of the large cities. It need not be said that for the lack of just such care and attention as could be obtained in a small, conveniently situated hospital many cases of accident have proved fatal. The same may be said, in a less degree, of medical cases requiring careful nursing and the constant watchfulness of a medical attendant. It seems strange, when there is hardly a rural practitioner in any populous neighborhood who has not wished for some accommodation for his sick poor and for his cases of accident, that some active measures have not been taken to secure the end in view.

The utility of these smaller hospitals has been demonstrated in a very practical manner in Great Britain, and there is no reason why such experiences should not be repeated here with even greater benefit to the class for which they may be established. Since 1859, when the first village hospital was projected at Cranleigh, Eng., there have sprung into existence over two hundred and fifty institutions, more or less widely disseminated over that country. It is estimated that fully fifty thousand worthy patients are annually ministered to by these means. These cottages are generally small, inexpensive in equipments, and are provided with a medical staff and nurses. The expenses of their maintenance are partially borne by the patients themselves, the deficit being made up by voluntary contributions of neighboring citizens and others.

There can hardly be any argument against the cottage hospital plan, when the latter is applied to large villages remote from metropolitan centres. Cases are constantly occurring in the former districts requiring just such treatment as can be obtained in the smaller hospitals. But not only would the patients be benefited by the care which they would thereby receive, but the physicians of the neighborhood would be relieved of an immense amount of drudgery in caring for their sick poor, scattered far and wide over their rides. The following remarks by Mr. Burdett ("Cottage Hospitals," pp. 163, 168) not only places this matter in its proper light, but gives some idea of the practical manner in which these institutions are managed:

"The country practitioner is a distinct gainer by the cottage hospital. It economizes his time and labor. The great difficulty with which a country doctor has to contend is the wide area he must cover in the course of one day's round. In bad cases, when more than one visit is necessary in the course of the day, the same ground has to be traversed twice, however carefully the visits may be managed.

"Now, however, it has become the rule at the majority of cottage hospitals, to appoint one member of the staff, either permanently or, where more than one practitioner resides in the village in which a cottage hospital is established, two or more in rotation a certain number of weeks or months, whose duty it is to look after all the cases in the institution that require special care, and to give him the title of medical director, or medical officer. By this means, when a severe case requiring constant attention and frequent visits occurs in the practice of a country doctor, it is, as a rule, removed to the hospital, and thus all difficulty and anxiety of the especially harassing kind before alluded to is obviated.

" . . . The duty of the medical director is not to initiate new systems of treatment for any but his own patients, but to carry out the wishes and views of his colleague, who would visit his own patients daily, and order any alterations which he may deem necessary or advisable."

Considering the simplicity in their construction, the cost of establishing these hospitals need not be great. The State Board of Health of New York, in a recent tract (No. 27) on the subject of temporary refuges for contagious diseases, gives some very simple plans of hospital construction which have the additional merits of cheapness and adaptability to the requirements of any community in any locality. But there is hardly a physician in any of the larger towns who is not competent to advise any committee or local health board not only as to situation, but as to plan of construction of these useful cottage hospitals.

THE INOCULATIVE FUROR.

THE idea that specific infectious diseases may be prevented or modified by vaccination has now obtained a remarkable grasp upon the imagination of pathologists. We present a list of what it has already been asserted can be done. Chicken cholera can be prevented by inoculating cultivated virus, says Pasteur. Anthrax can be made harmless in the same way. Rabies can be prevented by intravenous injection of the virus, according to M. Galtier, who has made a number of experiments upon sheep and dogs. Tuberculosis can be prevented, in time, in three different ways.

Dr. Wesley Miller avers that the virus of bovine tuberculosis, after being attenuated by cultivation in heifers, can be used safely as a vaccinating material upon the human body.

Dr. Robert Koch supplies to an imaginative English physicist materials for a theory by which tuberculosis is to be prevented. The cultivated bacilli are simply to be injected into the tissues of possible consumptives.

Most beautiful of all, Dr. T. H. Buckler, of Baltimore, Paris, and Boston, announces an antagonism between typhoid fever and pulmonary tuberculosis. This he tries to prove by citing cases of incipient phthisis, which recovered after having an attack of typhoid fever; also by various mortality statistics. Dr. Buckler would have persons inoculated with typhoid fever, perhaps by means of infected milk. The seeds of consumption would thus be driven from the system of those who survived. M. Aubert suggests a way to ameliorate or prevent the development of syphilis in persons who have an initial sore. His plan is based upon Galtier's experiments with rabies virus, and consists in injecting a little of the secretion from the sore directly into the veins of the patient. An ingenious, *à priori* argument is offered in the fact that a mother with a syphilitic fœtus sometimes seems to receive the disease in a mild form, or even to be made proof against it.

Out of all this inoculative activity no doubt much good will eventually come. But it must be admitted that the breezes of medical fashions stir up a great deal of chaff.

THOUGHT-READING AND BRAIN WAVES.

SOME time ago we chronicled the organization in England of a Society for Psychical Research. The name suggests an affinity to such institutions as the Institute for Prenatal Culture. The society in question, however, is a legitimate one, and contains many members who have an established reputation in scientific circles.

One of the first pieces of work done is a report to the council upon the so-called muscle reading. The investigation was made by three gentlemen: Professor Barrett, Mr. E. Gurney, and Mr. F. W. H. Myers.

They cite some interesting cases illustrating the exquisite tactile sensibility of some persons who are muscle readers. Thus a young lady could write words, or even rudely copy sketches which had been shown to her mother, and not to herself, the mother sitting behind her and placing a finger upon the girl's bare arm above the flexed elbow.

The chief object of the report, however, is to bring out for discussion the question whether there are not cases of alleged "thought reading," which cannot be explained by the theory of muscular sensibility. Scattered instances, says the report, pointing to an affirmative answer, will be encountered by those interested in the research. A number of instances are cited seeming to show the inadequacy of the muscular impression theory. An eminent *savant*, for example, was able to make his daughter do certain things fixed in his mind, even when there was no physical contact.

The *piece de résistance* of the report, however, consists of an account of an investigation made regarding the alleged thought-reading powers of a clergyman's family near London. This family was visited and studied, not only by the committee, but by Professors Balfour Stewart, A. Hopkinson, and others. The children of the clergyman in question consisted of five girls and one boy. They ranged in age between ten and seventeen years. They were all healthy and not in the least hysterical.

The experiments with them consisted in sending one of them from the room where the investigators sat. They then chose a card or a name. The child then returned, and, after thinking a moment, would in most cases guess the word selected correctly. Among three hundred and eighty-two trials there were two hundred and two successes. It was the object of the investigators to preclude every source of deception. The details of their precautions need hardly be given here. The character of the men and of the journal (*The Nineteenth Century*) in which the experiments are recorded makes it impossible to think that there was any conscious deception. The accounts given have some scientific value. Nevertheless, it is acknowledged that almost every instance of so-called "mind-reading" is really due to muscular sensibility, or a peculiar capacity to interpret facial expression. It would be illogical to refer a few apparently exceptional cases to a different law without extremely weighty evidence. The gentlemen who have made this psychological research do not appear to realize the involuntary capacities of the human organism.

JUVENILE SMOKING.

A VAST amount of evil has followed from the apparently trivial practice, introduced by tobacco-sellers, of "breaking" cigarette packages. We learn that in this city, at least, a most profitable part of this trade consists in peddling out cigarettes to

youths of all ages. School boys, store boys, cash boys, and the crowds of young gamins that wander about the street, furnish this demand for a penny's worth of cigarettes. The result is that an early habit of smoking is acquired; and, furthermore, of smoking tobacco that is rarely pure, and is often injuriously adulterated. Refuse cigar-stumps, valerian, opium, saltpetre, sulphuric acid, bromide of potassium, potato-leaves, and ammonia are some of the ingredients used in "tinkering" the tobacco of cigarettes.

It was with much regret that we learned of the failure to pass a bill last winter forbidding the sale of cigarettes, except by whole packages. Whether such a law would be constitutional and practicable or not, its enactment would at least draw attention to the existence of a growing evil, and one with which it is necessary to deal promptly.

Tobacco is a poison which acts with especial certainty upon the immature organism. It impairs nutrition, and in particular that of the nervous system, laying the foundation for subsequent nervous troubles of various kinds. The bad effect of its use, in the form of cigarettes, upon the sexual organs, prematurely stimulating them, is quite generally conceded.

There is in France a Society to Prevent the Abuse of Tobacco. In England, a Society for the Suppression of Juvenile Smoking has just been organized. Some similar agency might be of use in this country. At any rate the family doctor should do a little lay preaching upon this matter of juvenile smoking.

THE PREVENTION OF BLINDNESS.

The attention of sanitarians has heretofore been but slightly directed to the prevention of blindness, although the general subject of the hygiene of the eyes has often enough been discussed. A society has been formed within the past two years, however, in London, for the purpose of preventing blindness and ameliorating the condition of those suffering from that affliction. We are told by those interested in this organization that there are about thirty-one thousand blind persons in Great Britain, or 1 per 1,000 inhabitants. Of these it is estimated that at least two-thirds might have preserved their eyesight if proper care had been given it during infancy or later.

The cost to support the thirty-one thousand blind is said to be £310,000 sterling annually. To this direct expense there must be added the loss of the productive work which these persons might have done. So that the prevention of blindness is an economic as well as sanitary problem.

One of the first things attempted by this society was the offering of a prize for the best essay upon the means for preventing blindness. It has also attempted to instruct parents regarding the dangers to the eyesight which their children incur. Ten thousand tracts, entitled "Advice to Mothers," and describing the means for preventing ophthalmia neonatorum, etc., have been printed and distributed. Tracts have been collected from asylums for the blind also regarding the best means for educating and making useful this unfortunate class. At the Hygienic Congress, which is to meet this fall at Geneva, the subject will be taken up, and further measures adopted for carrying out the purposes of the society.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 14, 1882.

Dr. E. C. Seguin, President, in the Chair.

Dr. E. M. Cushier presented the heart and kidneys from a case of

MYXŒDEMA.

The patient was fifty-seven years of age, and the mother of twelve children. As near as could be ascertained, a change in the appearance or her face was noticed first about fifteen years ago, when it seemed swollen. Five years ago her face was distinctly swollen and presented a waxy appearance, and the lower extremities were also œdematous. The skin where it was tense was shining. The lips were thick and the eyelids baggy. There was a marked line of pallor between the eyelids and the cheek, and the skin of the cheek was brittle and dry. The tongue was unusually large, and increased in size toward the end of life. No cause for the œdema could be found. There were neither albumen nor casts in the urine; there was no evidence of cardiac disease, and the liver, spleen, and lungs were apparently normal. From this point the case went on, no specially new symptoms developing until about two weeks before death, when the patient had an attack of acute dermatitis, which at first was with difficulty differentiated from erysipelas. She also had acute inflammation of a portion of the left arm and a small circumscribed phlegmon in the right breast. Death occurred from progressive failure of heart power. There was slowness of intellectual action, slight diminution in hearing.

At the autopsy nothing special, macroscopically, was noticed concerning the spinal cord. The brain (as was to be regretted) could not be examined. The *heart* was enlarged, the aorta somewhat atheromatous, but the valves were sufficient. The *kidneys* were hard and there was atrophy of the cortical substance. The *liver* was of normal size and unusually firm in texture. All the *muscles* of the body were pallid. The thyroid gland had not been obtained. There was an enormous deposit of fat in the omentum, and there was infiltration throughout the cellular tissue, which seemed to be mucoid in character. The simple œdema of the extremities disappeared before death. The mucoid degeneration occurred only in the face, back, and upper part of the body.

Dr. Howe remarked that in some cases there was a large increase of subcutaneous fat as well as fatty tissue in other parts of the body, besides a chronic

general cellulitis which is progressive in character. Some authors had maintained that the œdema was the result of cellulitis.

Dr. Cushier said she supposed the œdema was due to the deposit of a low grade of tissue resembling mucoid tissue, and in some cases masses had been found, such as resembled the tissue of the umbilical cord, underlying the skin.

The President asked if the patient had numbness of any of the peripheral parts.

Dr. Cushier said there was no numbness. Mobility of the lips was absent, and there was a marked thickening or lack of sharpness of speech.

The President said he had been consulted recently by a patient upon whom he was almost ready to pronounce a diagnosis of myxœdema. The patient was a woman, forty-five years of age, who had unexplained œdema, which was peculiar, and produced a kind of leonine appearance of the face rather than a baggy look, with projection of the lips, marked thickening of the tongue, much impaired speech, and there had been œdema of the legs that had disappeared. She was anæmic. Examination of the blood showed 5,400,000 red corpuscles in a cubic centimetre, a good number, but ten per cent. of these were very small, many of them one-half, and a few not more than one-third the normal diameter, and the small globules were homogeneous and rounded.

The white globules were not abnormally increased in number. He thought the patient was not numerically anæmic, but was in the condition of microcythemia.

The mental processes were slow, memory was weak; she thought she was deaf somewhat, and she had had some numbness of the fingers.

The President regarded the connective-tissue diseases, apart from tumors, as an interesting part of pathology. For example, the hypertrophic condition, a disease of the connective tissue; the primary atrophy of connective tissue as shown in progressive facial atrophy; atrophy of large areas of connective tissue and connective-tissue substances, as bones, etc.

Some seven or eight years ago, before myxœdema had been recognized, he saw a case which he now regards as one belonging to this class. There was œdema of the face and extremities, not explained by any visceral condition nor fully by the anæmia.

Dr. Howe thought that the mucoid degeneration was secondary to a cellulitis.

CEREBRO-SPINAL MENINGITIS.

Dr. F. R. S. Drake presented a portion of the spinal cord removed from the body of a patient who gave the following history. He was a German, forty-five years of age, and a coalheaver by occupation, who was admitted to Bellevue Hospital on the 5th of June. On the 3d of June he was taken sick suddenly while in apparent health, and a few hours afterward had a convulsive movement, fell down, became unconscious, and remained in that condition until he died. He was admitted to Bellevue Hospital in a comatose condition, and there was considerable convulsive movement. After being placed in bed it was found that there was marked loss of sensation throughout the entire right side of the body. The temperature was 104° F.; pulse 98, hard, occasionally intermittent; the pupils were contracted, and respiration 24. Diagnosis of meningitis was made.

On the following day the temperature was 105° F.; pulse, 100; there was less loss of sensation, and the right side moved on irritation, although not so well as the left. There was considerable rigidity of the back, and tenderness upon pressure.

On the third day after admission he became partially conscious, but was unable to recollect distinctly. He was sufficiently conscious to protrude the tongue when told to do so. His temperature until the day before his death remained at about 105° F.; pulse, 120, and intermittent.

On the sixth day after admission the temperature was 106°; pulse, 150, and after a few hours the patient died.

At the autopsy all the organs were found normal except the brain and spinal cord. There was a large quantity of sero-purulent fluid at the base of the brain, and the entire surface of both hemispheres was covered with abundant purulent exudation. All the ventricles were widely distended with sero-purulent material. On removing the cord, purulent exudation was found throughout its entire length, but much the most marked upon the posterior surface.

The interesting features of the case were the suddenness and severity of the attack, and the restriction of the exudation almost completely to the posterior surface of the cord.

Dr. J. Lewis Smith said that cases of cerebro-spinal meningitis were not infrequent at the present time. He had seen a case within two weeks occurring in an infant who was taken suddenly with the disease, and after ten days the autopsy revealed lesions very much like those found in Dr. Drake's specimen. He thought it was the rule for the disease to commence abruptly.

Dr. R. W. Amidon presented a specimen of

SARCOMA OF THE BRAIN,

with the following history: The patient was a man forty-nine years of age, whose paternal grandfather died of cancer of the stomach, and his own sister died of cancer of the breast. The man had always had good health up to more than one year ago. There was no history of syphilis or injury of the head, and no coincident disease that would throw light upon his sickness.

In November, 1880, he had a severe attack of what was called neuralgia in the left occipital region, the seat of the most intense pain being between the mastoid process and the median line of the occiput, and extending down the back of the neck on the left side to the second and third cervical vertebræ. The pain was almost constant, with nocturnal exacerbations, and lasted about one month. The site of the pain was hyperæsthetic. This was nearly all the pain he had throughout the course of his sickness.

The next summer he was tolerably well, except a tired feeling in the legs considerable of the time, and occasional attacks of bad feeling which could only be ascribed to general malaise.

In October, 1881, his legs became quite stiff, particularly the right one, which was very anæmic and œdematous, and his walk was rather stiff and labored.

About this time he fell under the observation of two homœopathic physicians, one of whom diagnosticated locomotor ataxia, and the other anæmia of the spinal cord.

Dr. Seguin saw him about the middle of November, 1881, when he gave the history of having had, for the last three weeks, hemi-spasm, beginning in the right abdominal muscles, invading the leg and arm of the same side, but never involving the face. These spasms were unaccompanied by loss of con-

sciousness, but were confined to the right side. They recurred frequently, and finally he had a severe hemi-spasm which was attended by loss of consciousness, after which they occurred at short intervals. At that time Dr. Seguin made a note of hemi-paresis and stiffish walk of the right leg; pretty good grasp of the hand, no aphasia, choked disc, cardiac disease, or paralysis of the face.

About the only change in the symptoms which developed subsequently was an almost complete cessation of the spasms under the use of bromide and iodide of potassium in moderate doses.

On December 4th, when Dr. Amidon took charge of the case, there was some paralysis of the right leg and arm, the movements of the right arm and shoulder were restricted, speech was somewhat affected, but he had a very good grasp, no paralysis of the face or lesion of the optic nerve.

About the same time he had a severe attack of syncope, and on December 6th another fainting spell occurred, and he died. The symptoms immediately preceding death were complete right hemiplegia, almost complete aphasia, but no choked disc.

At the autopsy all the organs were found healthy except the brain. This presented a healthy appearance externally except that the convolutions on the left side were flattened, and also in the occipital region, whereas in the frontal region they were not at all flattened. There was no exudation or excess of fluid. In the brain was found a tumor situated in the paracentral lobule, and close to the main tumor was one of smaller size. Microscopical examination determined that it was a small-celled sarcoma surrounded by a zone of excessively vascular tissue. The peculiar features were 1st, retention of movement with considerable power in the periphery of one extremity, while at the same time the central power was paralyzed; 2d, the tumor was located where the centre for the foot and leg is, and it was so small and circumscribed that it afforded a good exemplification of localization of brain lesions.

Dr. J. Lewis Smith presented a specimen removed from the body of an infant that died at the age of fifteen days. Nothing unusual was observed with regard to the child; it was born at term, nursed well at first, and continued apparently healthy, when the first symptom noticed was rigidity of the masseters and inability to nurse. It was then discovered that it had

TRISMUS NEONATORUM

in its incipiency. At that time it was noticed also that the other muscles were somewhat stiff. The child was at once put upon the treatment which had been as effectual as any, namely, the use of hydrate of chloral in decided doses, and after four or five days the tonic rigidity of the muscles began to abate, and during the last twenty-four hours there was no rigidity, but rather a limp condition of the muscles of the limbs and neck. In the meantime, nourishment was administered by enemata. The child died on the fifteenth day. At the autopsy the only lesion discovered was

GENERAL PERITONITIS.

Dr. Smith remarked that there was no one anatomical lesion which caused the disease, and that its causes were various. The point of interest in this case was the existence of tonic spasms resulting from peritoneal inflammation.

The Society then went into executive session.

Correspondence.

FOREIGN BODY AROUND THE PENIS.

To the Editor of The Medical Record.

Sir: Cases of foreign bodies around the penis, like strings, silk ribbons, rings, etc., which boys while playing push over the gland or a part of the penis are not very seldom, but the case seen by me must be an unique one.

On July 13th a farmer boy, thirteen years old, was brought to my office for examination. The father stated that the boy complained of pain in the right side of the abdomen; the examination revealed considerable tenderness over the right hypochondriac region, no swelling, no redness. Diagnosis obscure: contusion or periostitis of rib. Ordered a liniment to be used and gave advice to bring the boy in again.

The next Monday, July 17th, the farmer came in a great hurry stating that he had found the source of the evil to be an iron nut which his boy had pushed over the penis.

His wife had noticed the same morning some blood in the bed, and he becoming frightened examined the boy all over, and found what is stated above; he was afraid that the whole penis was gangrenous. While going out in the country with him he told me that the boy had this nut on his penis since the week before the fourth of July, and that he remembers the day when the boy commenced to go lame; that the boy had worked sometimes in the field as long as he could stand it, and that this trouble was only accidentally found out by him. In consequence of the statement made by the man, I armed myself with a small anvil, chisel, iron saw, and hammer, to have on hand what might be necessary for an operation. Arriving at the farm I found, to my utter astonishment, an iron nut of large calibre around the penis, the weight and size of which I shall describe further on.

The iron nut was situated about one inch from the symphysis pubis, the penis and præputium in front enormously swollen in an S shape, looking bluish, and showing at several places small gangrenous spots. At the place of the ring there was a deep ulceration. The boy was laid on a table on his right side and chloroform administered, a small anvil put under his penis, and while I was holding the nut to prevent it from slipping off the anvil, I directed the farmer to use the chisel and split the nut with renewed strokes of the hammer; after splitting it we used the round handle of the chisel as a wedge, and by hammering on it we were able to break the nut in two parts. To my great surprise I found another ring behind this nut, which I believed to be a leather washer, but which proved to be an iron washer. The same process had to be gone through with chisel and hammer, but it was very difficult to get this ring open, as it would bend instead of break, but after half an hour's effort I was enabled to open it so far as to liberate the ulcerated part of the penis out of the ring. The whole operation lasted three-quarters of an hour, during which time I kept the boy in good narcosis.

At the place where the two rings laid the skin was entirely cut through to a distance of about one inch, the edges of the skin retracted and undermined, the corpora cavernosa denuded, but the

urethra intact; the boy had been able to urinate all the time.

The wound was washed with carbolized water, and lint put on with carbolized oil. The wound is granulating nicely and will be healed in a short time. The size of the nut is 1¾ inch square, the thickness $\frac{1}{16}$ inch, the diameter of the internal ring or winding ¾ inch, the weight is 4½ ounces and 20 grains. The size of the ring was correspondent to the winding of the nut, the thickness ⅛ of an inch, and the weight 6½ drachms, which makes 5 ounces, 2 drachms, and 50 grains altogether. The boy must have suffered intense pain by the continual tearing of these two foreign bodies on the ulcerated part, and only shame or fear of punishment would prevent him from telling the truth to his parents. In looking over my library I found a similar case narrated in Billroth and Pitha's large work on "Surgery," vol. iii., second division, part 8, page 27. In this case a ten-year-old boy had an iron nut weighing 50 grains around his penis for two years. The penis was found hard and swollen, bluish, the skin destroyed, corpora cavernosa and urethra denuded. The nut had to be held by two assistants with hand vises, sawed through with an iron saw, and removed by chisel and wedges.

As this case appears to be a very unique one, I thought it worthy of being published, and, incredible as it seems, the whole narration is nothing but the truth.

GEO. SEILER, M.D.

ALMA, WISCONSIN.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 6, 1882, to August 12, 1882.

PROMOTIONS.

COLONEL CHARLES H. CRANE, Assistant Surgeon-General, promoted Surgeon-General, with the rank of Brigadier-General, to date from July 3, 1882, vice Barnes, retired.

LIEUTENANT-COLONEL CHARLES C. KEENEY, Surgeon, to be Surgeon, with the rank of Colonel, June 30, 1882, vice Cuyler, retired.

LIEUTENANT-COLONEL JOHN F. HEAD, Surgeon, to be Surgeon, with the rank of Colonel, June 30, 1882, vice King, retired.

MAJOR JOSEPH B. BROWN, Surgeon, to be Surgeon, with the rank of Lieutenant-Colonel, June 30, 1882, vice Simons, retired.

MAJOR DAVID L. MAGRUDER, Surgeon, to be Surgeon, with the rank of Lieutenant-Colonel, June 30, 1882, vice Keeney, promoted.

MAJOR CHARLES PAGE, Surgeon, to be Surgeon, with the rank of Lieutenant-Colonel, June 30, 1882, vice Head, promoted.

CAPTAIN JOHN BROOKE, Assistant Surgeon, to be Surgeon, with the rank of Major, March 2, 1882, vice Frantz, deceased.

CAPTAIN WILLIAM H. GARDNER, Assistant Surgeon, to be Surgeon, with the rank of Major, June 23, 1882, vice Norton, deceased.

CAPTAIN CHARLES SMART, Assistant Surgeon, to be Surgeon, with the rank of Major, June 30, 1882, vice Brown, promoted.

CAPTAIN WILLIAM S. TREMAINE, Assistant Surgeon, to be Surgeon, with the rank of Major, June 30, 1882, vice Magruder, promoted.

CAPTAIN MORSE K. TAYLOR, Assistant Surgeon, to be Surgeon, with the rank of Major, June 30, 1882, vice Page, promoted.

HARTSUFF, ALBERT, Major and Surgeon. Having reported at these Headquarters on 3d instant, surrendering unexpired portion of his leave of absence, will proceed to Fort Union, N. M., and report to the commanding officer for duty. S. O. 153, Department of the Missouri, August 4, 1882.

TILTON, H. R., Major and Surgeon. Granted leave of absence for fifteen days. S. O. 155, Department of the Missouri, August 7, 1882.

TURRILL, H. S., Capt. and Asst. Surgeon. Granted leave of absence for ten days. S. O. 139, Department of the East, August 10, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 12, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever
August 5, 1882.	2	10	24	2	23	30	1	0
August 12, 1882	0	11	24	6	10	20	0	0

VOICE PRODUCTION.—Dr. P. H. Cronin, of St. Louis, Mo., writes: "In your issue of July 22d I was pleased to note a brief review of Patton's 'Voice Production,' and that the 'Singing Voice' would form the subject of an essay at the next meeting of the American Laryngological Association.

"It is a fact well known to those of us who have made the study of voice production an earnest one that far too little attention is paid by the mass of the profession to acoustic physiology as affecting vocal quality. As to the hundreds of cases of broken-down singing and speaking voices that claim the physician's attention, only a leading specialist here and there is competent to treat them.

"There is no good reason why every practitioner should not be able to give intelligent advice in such cases, which with every year become more numerous. Music is becoming a power in every home, and on all sides singing societies and concert organizations are springing up, with constantly widening influence. Elocution is being largely cultivated by another class of persons, outside of schools and colleges, and the miserably cultivated voices of nine-tenths of our so-called pulpit orators give evidence of faulty voice production.

"It may be that this want of knowledge in regard to vocal troubles is the result of that same education which, not many years ago, taught physicians to slight the practice of obstetrics and leave the field to old women. Happily, this stupidity has been replaced by a genuine interest in midwifery, which has placed that specialty in the front rank of the profession. But the troubles of the singing and speaking voice are as a *terra incognita* to doctors in general, while the real *practice* is left to men and women outside the medical profession.

"In 1878 my State sent me as commissioner to the Paris Exposition, and being a lover of music as well as of medicine, I determined on devoting a few leisure hours to the enjoyment of the former as a relief from study of the latter. I made visits to London, Dublin, Geneva, and Rome, and in all those capitals, as well as in Paris, I noted not only impairment of voice, but a letting down of physical energy in hundreds of cases of those studying singing. This was especially the case among the female singers. In a conversation with Dr. Thos. Hayden, of Dublin, a gentleman well known to the profession, I learned that the practice of singing, as taught by some of the so-called 'methods,' was seriously affecting young women; indeed, he surprised me by saying that 'Music killed more women than medicine.'

"Returning to America, I gave the subject of the singing voice and its dangers quite extensive study, and last year gave some of my ideas on the matter to one of our local journals. This brought down on me the fire of enraged 'voice builders,' and the discussion reached to nearly every point in the Mississippi Valley.

"The 'learned' physician will probably smile at the idea of the singing voice claiming the serious attention of a leading specialty and of a congress of doctors. Yet had Manuel Garcia not made his discovery of vocal action while viewing himself in the mirrored surface of the river Serpentine, those doctors would probably be little advanced in their specialty. For to a *singer* they owe a great part of what is known of the vocal apparatus. Flint copies Garcia's ideas *in extenso*, and characterizes the man himself as 'one profoundly versed, theoretically and practically, in the knowledge of music, and possessed of great control over the vocal organs.'

"Mr. Patton's work, though faulty in some respects, is creditable to the author's good sense, inasmuch as he quotes only recognized medical opinions. There seems even here, however, a slight misunderstanding of regional anatomy, for on page 11 he confounds 'clavicular' breathing with the 'abdominal' type so severely condemned by Dr. Wing, of Boston. Aristotle says: 'Define your terms and discussions will cease.' Abdominal breathing of the exaggerated kind has an analogue in emesis or defecation. The descent of the diaphragm displaces the abdominal viscera, and we can easily see what would be the result in cases where young girls are practising this modern 'method.' So great is the excess to which this *abominable* method is carried, that the son of ex-Mayor Cole, of this city, tells me pupils are *finished*, when by a powerful action of the abdominal muscles, a *piano can be moved*, and this in Boston, too.

"The reference to Madame Mara's voice, as showing the microscopic grades of tension of the vocal cords, is merely the propagating of a long-accepted theory that the vocal cords alone give graduation and tone. That Dr. Cohen accepted this theory is not to be wondered at. Helmholz, in his enthusiastic forgetfulness of Deity, tells us that were an optician to bring him such a faultily constructed instrument as the human eye he would reject it. But the great scientist forgot that an element known to us as *vitality* enters into the working of the human eye, and makes it more than a match for any scientific substitute. Dr. Cohen, in like manner, forgets that the vocal cords play but a small part in the rising and lowering of the pitch, the resonating chambers, with the partial tones and the shortening of the vocal tube, doing the major part of the work. In fact, the 'seventeen thousandths of an inch shortening' of a vocal cord would not in its resultant tone be perceptible to any but *heavenly ears*.

"Far from any apology being necessary for the appearance of a notice of such a work as Mr. Patton's, I feel that such notices are productive of good. Doctors are, after all, but units in the social aggregation of humanity, and being *men* as well as doctors, are impressed by surrounding influences. Hence, by a reflex action the needs of society, its culture and progress, should find sympathy and aid amongst those who, by reason of their educational training, should be above the mass of humanity."

COMPETITIVE EXAMINATION FOR THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY.—The following is a list of candidates for the position of Assistant Surgeon, United States Army, in the order of merit: W. E. Hopkins, University of New York and University of Virginia; C. C. Barrows, University of Virginia, Va.; Benj. Munday, Medical College of Virginia, Va.; W. L. Kneedler, Jefferson Medical College, Pa.; G. F. Wilson, University of Virginia, Va.; W. O. Owen, University of Virginia, Va.; P. R. Egan, College of Physicians and Surgeons of New York; W. J. Wakeman, Yale Medical College, Conn.; Edward Everts, University of the Pacific, Cal.; C. N. B. Macauley, Jefferson Medical College, Pa.

THE BIRTH OF AN ELEPHANT.—Dr. Gustavus E. Sussdorff, of New York, contributes to the July number of the *New York Medical Journal and Obstetrical Review* an account of the process of parturition as it took place in the case of the elephant "Queen" last February. The period of gestation was 597 days. There was no noticeable enlargement of the abdomen until it suddenly became quite prominent the day before labor began. This enlargement did not subside with the expulsion of the fœtus and after-birth, but continued four days longer. During the latter month the mammæ became swollen, and soon filled with serous milk. These were the only signs of pregnancy to be seen. The labor began at 3 P.M., February 2d. At this time the mammæ were greatly distended with milk, which came away continuously in drops. The vagina now began to drop down and swell. In a short time thick mucus began to come from the vagina in long ropy strings, and almost poured out just before delivery. From 3 until 8 o'clock "Queen" was evidently uneasy, as she constantly moved her body from side to side, but did not seem to suffer *pain*, and quietly munched some hay up to the very moment of delivery. At 8.10 the young elephant was born, the head presenting, completely enveloped by the unbroken membranes. The head and part of the body rested between the hind legs of the mother, and touched the ground. Without waiting a moment, the mother ruptured the membranes with her two hind feet, when the young one rolled out on its back. The membranes were no sooner liberated than they quickly returned into the vagina. The umbilical cord had not been seen at all, having probably been torn away during the descent of the fœtus. The mother now quickly turned to the young, and on seeing it began to roar and bellow furiously, which she continued for ten minutes. As soon as she saw the baby she also at once placed one fore-foot on it and rolled it several times, as one does a lemon under the palm of the hand, the bellowing and roaring

continuing. In a moment or two more she placed her abdomen upon a short post in the ground, to which she was chained, standing almost upon her head, and grasping the post with her trunk, thus forcing the abdomen with great power against the post. "Queen" remained in that position for about ten minutes; then became quiet, and, while playing with her young, took some food. Nothing indicative of after-pains could be recognized after this, and in one hour and thirty minutes the placenta was expelled. With it there came about two quarts of clotted blood. There was no hemorrhage either from the uterus or from the umbilicus of the calf. The duration of labor was five hours and ten minutes. The calf, a female, weighed 245 pounds, and stood just three feet high. It began nursing one hour and forty minutes after birth. It had two middle upper teeth. The umbilical cord entered the abdomen about three inches anterior to the vagina, and had been detached very close to the abdomen, as none was visible at that point, the canal being open and large enough to admit a good sized finger for half an inch. Dr. Sussdorff remarks that there are several very interesting and instructive points in this history. First, the period of gestation is evidently not affected by change of climate and captivity, lasting about nineteen and a half months. The time of labor is short, and evidently there is not much pain. The sagacity of the animal is remarkable, as shown by the manner in which she ruptured the membranes, the means she took to excite respiration by rolling the young, and, finally, her effort to express the placenta from the uterus. He then describes the placenta and the fœtal membranes, comparing them with those described by Owen, and adds a summary of various observations that have been made of the milk of the elephant as compared with that of other animals, giving drawings which show its microscopical characters in comparison with those of cow's milk.

A Jamaican Galactogogue.—Nursing Jamaican women are in the habit of drinking an infusion known as cotton-leaf tea, in order to increase the secretion of milk. Mr. Anderson has employed this in women whose milk was scarce, and was convinced of its powers as a galactogogue. The infusion is made from the leaves of the plant known as the *gossypium bortadense*. The dose is six or eight leaves to the cup, and according to the effects obtained four cupfuls or more may be taken in twenty-four hours; some are in the habit of drinking two or three litres of the infusion daily. Its taste is not disagreeable, and many take it as they would black tea.—*El Sentido Cat.*

Abscess of the Brain following Fracture of the Skull.—Dr. J. H. Shorter, of New York, communicates the following interesting case: Jenny I——, aged three years, of good personal and family history, was first seen on July 9th. On July 6th she had slipped, and, falling forward, had struck on a piece of kindling wood which she held in her hand. She did not seem stunned much by the blow, which was inflicted just below the superior edge of the left orbit. There was no apparent injury of the globe, and only a contused wound of the upper lid, with but slight abrasion. Such was the report of the parents, who insisted that the piece of wood, which had blunt, square ends, did not penetrate the skin at all. On July 9th there was œdema and puffing of the upper lid, and some exophthalmus; the child seemed to suffer from pain. The parents would consent to no operative procedures whatever. On the 11th the local symptoms were worse and constitutional disturbances very well marked. From a state of lassitude the patient gradually fell into a stupor. On the 12th, the little one being in the condition mentioned, a deep incision was made immediately below the upper edge of the orbit, and a large amount of pus evacuated. Marked amelioration of the symptoms followed. On examination with the finger passed through the external opening, a fracture of the orbital plate of the frontal bone was discovered, of rectangular shape, 25 by 12 mm. in size. The fragment of bone seemed to be driven upward, and the diagnosis of meningeal and probably cerebral laceration also was made. Two days later the temporary improvement of the symptoms was succeeded by a relapse. Dr. Sabine, aided by Drs. Gruening and Oppenheimer, then removed with great difficulty a piece of bone which was tilted upward perpendicularly into the brain substance. Subsequent syringing of the cavity of the wound with a one per cent. solution of carbolic acid caused immediate improvement, restoring consciousness and reducing temperature from 105° to 102½°. The symptoms remained fair till the 14th day, when spasmodic jerking of the left shoulder set in; later there was diaphragmatic spasm, much restlessness and groaning. On the 16th day the temperature was found to be much lower on the right side than on the left (102⅘° and 104⅕° respectively). This difference remained to the last. Abscess of the brain being determined upon as the probable cause of the continued bad symptoms, Dr. Shorter passed a trocar up almost perpendicular into the anterior lobe of the cerebrum through the opening of the fracture. Some serum but no pus escaped; no improvement was apparent. Patient died the next evening.

The autopsy revealed a general meningitis, and on dissection an abscess cavity the size and shape of a pigeon's egg, occupying the anterior part of the left hemisphere, but not communicating with the wound in the orbital plate or the surface of the brain. The trocar had passed within a millimetre of the abscess and entered the ventricle. A piece of bone similar to but smaller than that removed was found attached to the opening and projecting upward into the brain. The case is of interest as showing that injury may occur to this thin bone, and consequently to the brain substance, without perforation of the skin or soft tissues. It also shows the importance of the early removal of collections of pus around the orbital cavity.

Another Sign of Death.—*La Electricidad* announces a discovery which will prevent the horrible consequences of precipitate burials. The electric current affords a certain method of determining whether life is really extinct. Two or three hours after arrest of the cardiac beat the entire muscular system has lost its excitability. An electric current then passed through the muscles fails to call forth any contraction. If this procedure be adopted five or six hours after cessation of the signs of life, and no contraction is produced, death is certain, since neither fainting nor catalepsy can abrogate muscular contractility.

A Healthy Brain Necessary to a Free Will is the title of an interesting discourse delivered by Dr. C. G. Comegys at the banquet given by the medical profession of Cincinnati to the Association of Medical Superintendents of Insane Asylums.

Original Communications.

HEMORRHOIDAL DISEASES.

Equitation Considered as a Cause, Preventive, and Cure.

By WILLIAM BODENHAMER, A.M., M.D.,
NEW YORK.

The charming exercise, *horseback-riding*, was highly extolled, both by the ancient and the modern physicians, not only as a source of convenience and pleasure, but also as a most valuable remedy in the treatment of some diseases. Hippocrates himself speaks approvingly of the practice of horseback riding at full gallop, in the open fields, as a remedy for some affections ("De Victus Ratione," lib. ii.). Oribasius, who relied so much upon other gymnastic exercises as remedial measures in the treatment of disease, passes the highest encomium upon equitation. After declaring that riding slowly is tiresome, he goes on to say that when a horse is put on the stretch, though he violently shakes the whole body, yet this concussion is beneficial, for it strengthens the entire system, especially the stomach; and it purges and quickens the organs of sense, beyond all other exercises ("Collectorum Medicinalium," lib. vi., cap. 24, "Equitatione." Folio. Basilæ, 1557). The Latin writers, as well as the Greek, also allude to horseback-riding as a therapeutic measure in the treatment of disease. The Romans, however, although they exceeded the Greeks in their admiration and prosecution of gymnastic exercises generally, fell greatly behind the Greeks in their attention to and recommendation of horseback-riding as a remedial measure. The celebrated Bagliva, however, was one of its greatest admirers, and speaks of having cured two hypochondriacal patients, who were desperately ill, by causing them to ride in the country on asses ("Specimen de Fibrâ Motrice," lib. i., cap. 8. In Opera Omnia. Medico Practica et Anatomica. 8vo. Lugduni, 1710). As an evidence that the Italians, excepting the military, were at an early period not very much addicted to horsemanship, especially to fast riding, I will quote a proverb of theirs, which says "*A galloping horse is an open sepulchre.*" In consequence, therefore, of this established principle, or opinion as it were, of theirs, they conducted their races at Florence by running the horses without riders upon them. And as a further evidence of the timidity of the Romans, which kept them in those days from the enjoyment and benefit of the best and most useful kind of riding, I will refer to some of the sayings of Martial, one of their celebrated poets, who advises his friend Priscus, in hunting the hare, to moderate the speed of his horse; and finally warns all hunters of that animal to beware of fast riding, lest they break their necks, instead of killing the hare ("Epigrammatum Medicæ aut Philosophicæ," lib. xii., Epig. 14. 4to. Venetiis, 1657). Mr. Fuller says: "The exercise of horseback-riding, upon several accounts, may be esteemed the best and noblest of all exercises for a sick person; whether we consider it with respect to the body or the mind. If we inquire after what manner it affects the body, we shall find that it is a kind of mixed exercise, partly active and partly passive. The lower parts of the body being in some measure employed, while the upper parts are almost wholly remiss or relaxed. Nay, where a man is easy, is sure of his horse, and rides loose, there is very little action on his part; but he may give himself to be as careless almost as if he were seated on a moving chair, so that he may be said to be exercised rather than to exercise himself, which makes the case widely different from almost all other sorts of exercise, as walking, running, stooping, or the like; all of which require some labor, and consequently more strength for their performance" ("Medicina Gymnastica," p. 140. 8vo. London, 1740).

I would observe here, by way of digression, that anciently, at different periods, and for a longer or shorter time, horses were managed by the voice alone, or by the switch, without either bridle, saddle or stirrups. For saddles they sometimes used the skins of animals, or cloth. Even the aborigines of our own country not long since, rode and managed their horses somewhat in the same manner, if some of them do not even now do it. Saddles when first made, were without pommels; and the ladies are especially indebted to the celebrated Catherine de Medici for the introduction of the pommel on their saddles. Previous to her time, female equitation was conducted *à la planchette.* According to the distinguised Abbé Brantôme, Catherine de Medici was the most perfect and accomplished horsewoman of the age in which she lived, and he says that she introduced the pommel on the lady's saddle for the better display of her unequalled symmetry of person.

Equitation is a passive-active exercise, and differs materially as to whether the horseman rides according to the French or the English fashion, so distinguished. The French rider, with long stirrups and only the ball of the foot resting in them, sits firmly in the saddle with his nates and the saddle in close and constant contact, as if he were part of the horse himself; by which it will be observed, the whole pelvis is the principal *point d'appui*, so that the motions of the horse are imparted to the trunk, and the shocks and vibrations occasioned by them, act more forcibly upon the abdominal viscera. The muscles that are principally engaged in this active movement are those of the trunk and inner sides of the thighs. While, on the contrary, the English rider with short stirrups, and the instep of the foot resting in them, does not sit closely and firmly in the saddle, but makes the stirrups serve him as *points d'appui*, in consequence of which his body is therefore raised at every movement of the horse, because the nates are unsupported, and by reason of this he is constantly compelled to exert himself in more active movements in order to maintain his upright position. It is true he may have the advantage, if it really is an advantage, of more effectually opposing the shocks occasioned by the motion of the horse, and longer warding off the fatigue which they induce; but are not these very efforts which he is continually compelled to make to keep his erect position, almost, if not equally tiresome. These two methods of riding, then, doubtless have their advantages and disadvantages, as remedial measures, and must be made to conform to the exigencies of the patient's condition. For the prevention and the cure of the hemorrhoidal disease, however, the French fashion of riding is, as a general rule, for obvious reasons, the best.

After having in the preceding general remarks referred to the subject of equitation as a remedy in diseases generally, I will now proceed to consider it especially in relation to the hemorrhoidal disease.

It was an opinion held both by the ancients and

moderns, that horseback-riding, though valuable as a remedy in some diseases, yet it always and under all circumstances, tended to the production of the hemorrhoidal disease, and that it was especially prejudicial to those already suffering from it. This opinion or supposition, even now entertained by so many, can only, however, be accepted as true to a very limited extent. Such an opinion I have always considered pernicious, inasmuch as it deters many persons of sedentary habits, invalids and others, from availing themselves of this delightful and sanative exercise. It is true that violent horse exercise may prove a cause of hemorrhoids in consequence of the irritation and chafing which it occasions in the ano-perineal region in those who are unaccustomed to horseback riding, or those who ride for the first time, or ride a long distance in warm weather, which in such produce contusions and chafings, which more or less tend to the production of hemorrhoids. And I will here further remark that riding without a saddle, that is, bareback, would also be well calculated to cause or to lay the foundation of the hemorrhoidal disease. This effect, however, would not be due to the concussions produced by the motion of the horse, but solely by the heat given off and received from the animal in a long ride, especially in warm weather, and by the contusions and chafing of the anal region which attend this kind of equitation. The ancient Romans seemed to have been aware that horseback-riding without a saddle would cause hemorrhoids, for Martial in his epigram entitled "Ephippium" advises the coursers on this account not to ride bareback;

> "Strangula succincti venator sume veredi;
> Nam solet à nudo surgere ficus equo"
> (*Op. Cit., lib. xiv., Epig.* 86).

Horseback-riding must therefore be taken with precaution and prudence on a good horse and on a good saddle by those who are acquainted with the science and art of horsemanship, and accustomed to riding. If these prerequisites obtain, equitation is much more frequently a prevention or a cure of hemorrhoids than a cause of them. I am well aware, however, that it under all circumstances is considered a potent cause of hemorrhoids by a large number of eminent authorities. I must be excused, however, from naming but two or three of the old authors. The celebrated Truka maintained that horseback-riding is uniformly a cause of the hemorrhoidal disease ("Historia Hæmorrhoïdum." 8vo. Vindobonnæ, 1794). Baldinger says that he has seen the horsemen in the army much more frequently affected with hemorrhoids than the foot soldiers were ("Introductio in Notitiam Scriptorum Medicinæ Militaris." 8vo. Berolini, 1764). Gabelschower reports the case of an old man, who, at the time of a profuse hemorrhoidal bleeding, took a long ride on horseback, which completely suppressed the hemorrhage, but a hematuria soon followed of which he died on the eleventh day ("Curationum et Observationum Medicinalium," cent. vi., cur. 50, p. 116. 12mo. Tubingæ, 1627). This case, which was intended to prove that horseback-riding is exceedingly dangerous in hemorrhoids, signally fails, in my opinion, to do so; and to say the least of it, it is of a very equivocal character.

Now, on the contrary, however, the illustrious Baron Larrey, who was so long Surgeon-in-Chief of the Imperial Grand Army of France, under the Great Napoleon, in accordance with his vast experience, declared positively that the motion of the horse was much better calculated to cure hemorrhoids, than to cause them; that he had even seen soldiers, on the eve of an engagement, and in the midst of a violent attack of hemorrhoids, compelled to mount their horses and remain in the saddle for hours, and who, through the excitement of battle, entirely forgot their infirmity and found themselves cured when the conflict was over. Indeed, he himself was in the habit of causing soldiers affected with hemorrhoids, to ride on horseback at full gallop; and he declares that he never saw any bad effects to supervene, but generally, on the contrary, the most salutary consequences ("Mémoires de Chirurgie Militaire, et Compagne." 8vo. Paris, 1817). The able and the distinguished M. de Montègne says that, "I do not know of a surer, or a better preservative from hemorrhoids than habitual equitation" ("Des Hémorrhoïdes, ou Traité Analytique de toutes les Affections Hémorrhoïdales, p. 106, 8vo. Paris, 1830). Being well acquainted with General H. H. Sibley, a Creole of the State of Louisiana, now residing at Fredericksburg, Virginia; and knowing that he had been a commanding officer in the cavalry service for the greater part of his life, I wrote him on the subject of equitation, as a cause, a preventive, and a cure of hemorrhoids, and asked him to give me his experience and opinion in relation to it. The following is an extract from his letter, dated June 4, 1882: "In regard to your inquiry relative to equitation, as a *cause*, preventive, and cure of hemorrhoids, I can speak ex cathedrâ. I entered the cavalry of the United States Army in 1838, and served throughout every climate on this continent, up to 1861. Again in the Confederate Army, during the continuance of that war; and lastly in Egypt as a general officer for four years. During this period of over thirty years' almost continual service, from the tropics of Mexico to the frozen crests of the Rocky Mountains, I have never been afflicted with any disorder of the anus, nor have I ever known a soldier in the ranks thus afflicted. True, they were and needs must be entirely free from any malady on their enlistment; but surely horseback exercise never *occasioned* any malady of the anus. Amongst the officers, but two in my regiment were thus afflicted; one a captain, who complained of some anal malady, but who never shirked the saddle; another who had chronic piles and who always shirked duty. He is still a living monument of worthlessness, though fully seventy-five years old. Thus you will perceive that my experience proves that horseback-riding rather *prevents* than induces piles. Whether it tends to alleviate or to cure them I have no knowledge or experience, never having been afflicted in this way myself; nor have I ever heard of a complaint from soldiers. I think the constant exercise, together with the regular habits and *initial* healthy condition of the cavalry soldier preserves the healthfulness of the anal parts. It was my constant habit after a long march in the saddle, to bathe the parts in a basin or in the creek, and the soldiers generally followed my example."

I have myself witnessed the good effects of horseback exercise, in several instances. Some of the patients had the disease in the form of varices in the anal region; while in others it was attended by regular organized tumors. These patients positively refused surgical treatment, and were then advised to lay aside the numerous pile nostrums they were using, and try regular horse-exercise for a while, which they did. The pressure of the saddle and the motion of the horse in these cases ap-

peared to exert a most salutary influence in removing the congestion and the tumors. Indeed, the agitation of the intestines, and the repeated concussions occasioned by the motion of the horse, favor the free circulation of the blood through the entire abdominal cavity, and especially through the hemorrhoidal vessels, and at the same time, the inferior portion of the rectum, with all the other contiguous parts, which participate in this healthful movement, receive an augmentation of tone and elasticity which are well calculated to prevent and to dissipate engorgements; and furthermore, there is scarcely anything that can assist, in a more efficacious manner, the action of a torpid liver, than the gentle shaking motion of horseback-riding, which induces a more active secretion in this organ, and absorption in the intestines, by accelerating the circulation. I have known many planters, as well as overseers of plantations, in the extreme southern portion of our country, some of whom were of full habit and free livers, who appeared to be nearly half their time on horseback, and yet, as it were, knew nothing of the disease, never having experienced an attack of hemorrhoids.

In my opinion horse-exercise is not prejudicial, even to the hemorrhoidarian, but on the contrary, is just the reverse. There is not a more certain preservative from hemorrhoids, than regular horseback-riding. Should the patient, however, be unaccustomed to equitation, and take it in a sudden and violent manner, he will suffer severely for several hours, especially if he has external tumors, or internal ones, in the least protruded. I would, therefore, advise such a patient not to take this exercise if he has inflamed external hemorrhoids, or internal ones protruded, but first have the inflammation subdued and the tumors completely returned, before mounting the horse. It is true, that in such cases it is frequently inconvenient and a little painful at first to ride, yet, if persevered in, great and lasting relief will often be obtained; and I do not think that hemorrhoidal tumors, whether external or internal, should ever contra-indicate, at least a trial of horse-exercise, by those especially who are averse to all surgical treatment; for if equitation is taken in a proper manner, carefully and prudently, it is a powerful means of preventing and of curing this affection.

I would remark in conclusion, that the gymnastic movement-cure of hemorrhoids, which has some advocates, is founded somewhat upon the same principle as that of equitation; but, while it is much more accessible to the majority of patients, it nevertheless falls far short of being as efficacious as horse-exercise.

A gymnastic movement for the cure of hemorrhoids, it is said, is practised at Bellevue Hospital, with success. "It consists simply in trying to touch the toes with the fingers, without bending the knees. This movement, though difficult at first, soon becomes easy; it not only strengthens and develops the muscles of the abdomen, but also those of the legs and thighs. It assists the action of certain remedies, and thus aids in the cure" (New York Medical Record, September 27, 1877, p. 599).

249 Madison Avenue, New York.

Sir J. Lubbock (*Journal of Linnean Society*) concludes, from a prolonged and careful series of experiments, that bees distinguish colors, and have a decided preference for blue.

INJECTIONS OF THE VIRUS OF HYDROPHOBIA INTO THE CIRCULATION

Do not Produce Rabies and Seem to Confer Immunity from the Disease.

Translated from the French by GEO. M. STERNBERG,
Surgeon, U.S.A.[1]

[*Note by translator.*—Not having seen in the medical journals any reference to the following important and interesting communication to the French Academy, I have thought it worth while to translate it without abridgment for the benefit of the readers of The Medical Record.]

Since I have undertaken to study hydrophobia I have had occasion a number of times to inject the virus of rabies into the jugular vein of the sheep, and I have never seen the disease appear as the result of such injections. Moreover, animals which have been inoculated in this manner, having been subsequently utilized for other experiments and having been inoculated with the virus of rabies in other ways have not contracted hydrophobia. The following are the principal facts which I find recorded in my record of experiments:

Experiment No. 1.—May 4, 1879.—Inoculated two sheep, one in the jugular vein, and one in the subcutaneous connective tissue; the last became rabid on the 10th of June, and died two days after; the other resisted and was again inoculated by a different method on the 9th of October and on the 23d of December, without result. This sheep was utilized for other researches March 11, 1880.

Experiment No. 2.—October 9, 1879.—Three sheep were inoculated with the virus of rabies, *two by punctures* and scarifications and one by *intra-venous injection;* the two first died of hydrophobia on the 26th of October and the 7th of November. The other was re-inoculated by punctures and scarification March 26, July 8, and December 19, 1880, without having contracted the disease.

Experiment No. 3.—December 19, 1879.—Two sheep were inoculated with the saliva of rabies, one by hypodermic injection, the other by *intra-venous injection.* The first died of rabies January 24, 1880; the other in good health on the 24th of February, was re-inoculated by different methods on three different occasions without result up to the time it was employed for other researches, December 9, 1880, two months after the last inoculation.

Experiment No. 4.—December 31, 1879.—Two rabbits were inoculated by punctures, and two sheep by *intra-venous injection.* The two rabbits died of hydrophobia January 17 and 22, 1880. The two sheep were re-inoculated by scarification March 20, May 14, and July 18, 1880, but still remained in perfect health on the 9th of December of the same year.

Experiment No. 5.—April 19, 1880.—Two rabbits were inoculated by punctures, and one sheep by *intra-venous injection.* The two rabbits died of hydrophobia April 30th and May 9th. The sheep was re-inoculated by punctures and hypodermic injection June 24th and October 17th. This animal was utilized for other researches January 25, 1881.

Experiment No. 6.—February 3, 1881.—Two sheep inoculated with virus of rabies, one by hypodermic injection, the other by *intra-venous injection.* The first died of hydrophobia March 2d, the other

[1] Communication to the French Academy of Sciences by M. V. Galtier, presented by M. Bouley (C. R. Ac. des Sci., t. xciii., pp. 284-5).

resisted and was re-inoculated by punctures and scarification March 13th and 17th. It remained in good health July 28th.

Experiment No. 7.—March 13, 1881.—One goat and three sheep were inoculated. One of the sheep, inoculated by punctures, died of rabies April 22d. The two other sheep and the goat, inoculated by *intra-venous injection*, were re-inoculated by scarification March 27th and July 28th, without result.

Experiment No. 8.—February 19, 1881.—Five rabbits received, as a drink, a mixture of water and saliva of rabies. Three resisted and two died of hydrophobia March 2d and March 9th.

The following conclusions are drawn from these facts:

First.—Injections of the virus of rabies into the veins of the sheep do not induce rabies, and seem to confer an immunity against it.

Second.—Rabies may be transmitted by injection of the virus, although the locality where the inoculation takes place in this case has not yet been determined. It is nevertheless demonstrated that there is danger of contracting the malady by the introduction of the virus into the alimentary canal.

I propose to verify the fact of immunity as the result of intra-venous injections by experiments upon *the dog*, and I am endeavoring to ascertain if intravenous injection of the virus *practiced a day or two after a bite, or an inoculation with virus, can preserve an animal from rabies.*

A PECULIAR CASE OF TRACHOMA.

By FRANCIS VALK, M.D.,

ASSISTANT SURGEON MANHATTAN EYE AND EAR HOSPITAL, VISITING PHYSICIAN TO RANDALL'S ISLAND.

Granular lids, as illustrated at the clinics, generally present the same picture, with more or less superficial ulceration and vascularization of the cornea, from contact of these trachomatous bodies when the eyes are opened and shut. The treatment is always about the same, while the results are only a relief to the patient without a cure. As a change from the usual run of these cases, the following one may be at least interesting, and perhaps instructive, to others, both in its appearance and treatment.

Frank W——, aged five years, of Beaufort, South Carolina, was sent to me by Dr. Cooper for advice and treatment, on September 8, 1881, with the following history from his mother: When the boy was born the eyes seemed to be all right, until six months of age, when they noticed some small superficial abscesses on the right upper lid; these were lanced, and a day or two after there was a slight discharge of matter from both eyes, small in quantity and gluing the lids together at night. This condition was treated by some mild astringents, until two years ago, when both lids became inflamed, with an increased discharge of pus. Again applications were applied, but with no improvement, nor were the lids even inverted nor their correct condition ascertained until about one year ago, when the present condition was discovered, but still only treated by the daily instillation of sulphate of copper.

I found the boy very anæmic. Strumous diathesis, appetite poor, and bowels irregular. Has slight naso-pharyngeal catarrh, with enlargement of both tonsils. Family history good, and surroundings, when at home, excellent. He opens the eyes well, no photophobia or lachrymation, and both cornea perfectly clear and bright; has slight blepharitis and refraction hyperopic, by the ophthalmoscope.

On examination of the lids, the lower presents the usual appearance of chronic conjunctivitis, smooth, and somewhat congested; on everting the upper lids, I found them to be covered with perfectly *dry* bodies, a very pale pink in color, no signs of blood-vessels in any part of the everted lids; they were hard to the touch like cartilage, and shaped like little squares lying close together, about 1 mm. on each side, with a deep and narrow sulcus between them, and small masses of dry pus lying in the retrotarsal fold, the presenting surfaces of these trachomatous bodies were perfectly flat and even.

The treatment adopted was first directed to his general health, while locally I applied a strong solution of nitrate of silver, any excess being removed by absorbent cotton. After two or three weeks' treatment, without any improvement except in his general health, he was seen by Prof. D. B St. John Roosa, of the New York University. He advised me to try scarification of these bodies with a sharp needle and to continue the silver, should this fail, to then try some operative interference. Following his advice the lids were freely scarified, with only slight hemorrhage, and the applications continued. Finding no material improvement, I decided to operate, and with the assistance of Drs. H. C. Cooper and Ramsdell, Jr., the boy was etherized, I then endeavored to cut or shave these granulations off and did succeed with a few, but finding that process unsatisfactory, I took a pair of new and sharp v. Græfe's fixation forceps, and taking up each body separately, between the teeth, I first pressed them tightly and then twisted the bodies off. This process was quite slow and took some time, but it seemed to be doing the work very effectively. I removed all that I could see, and then applied an 80-grain solution nitrate of silver. The boy recovered from the ether well, enjoyed a good night's rest, with little or no reaction in the lids nor ecchymosis in the surrounding tissues. Afterward he had constant daily applications of various astringent preparations, but with no return of his trouble, and left for home with instructions to use a mild spray of tannic acid and glycerine, applied daily.

The appearance of the everted lids in this case was very peculiar and difficult to describe, being quite different from any case I ever saw, and being so devoid of any proper blood supply that it was impossible to stimulate the absorbents so as to cause these hard, cartilaginous masses to disappear with any possible applications. I was well satisfied with the result, and should at once adopt it in any similar case.

233 East Thirty-fifth Street.

Mosquito Oil.—A correspondent from Sheepshead Bay, a place celebrated for the size of its mosquitoes and the number of its amateur fishermen, recommends the following as a very good mixture for anointing the face and hands while fishing:

Oil of tar	1 ounce.
Olive oil	1 "
Oil of pennyroyal	½ "
Spirit of camphor	½ "
Glycerine	½ "
Carbolic acid	2 drachms.

Mix. Shake well before using.—*Ex.*

MULTIPLE TUBERCULAR TUMOR OF THE BRAIN CAUSING EPILEPSY.

By H. E. ALLISON, M.D.,
WILLARD, N. Y.

F——, aged sixteen years, suffered from epilepsy for more than three years, and was extremely demented. His previous history is unknown. He was wet and dirty at night, and frequently during the day. His convulsions occurred at intervals of from two to three weeks, and then a storm of several would take place, leaving him very dull and very stupid for several days. At all times he was irritable. He walked about the hall with a tottering gait and a tendency to fall forward, and talked in a shrill, unintelligible manner, while the saliva constantly ran from his mouth. He had dark hair and eyes, fair skin, full habit, and showed the usual physical signs of scrofulosis to a marked degree. For several months before his death he had suffered from suppurating glands of the right axilla, involving the whole chain, with much discharge, and also from tuberculosis affecting both lungs. During the progress of the disease, he suddenly passed into a state of stupor, and died in a few hours.

At the autopsy the glands of the mediastinal space were found enlarged, and under the upper portion of the sternum a pasty mass of cheesy matter was found, about an inch in diameter. The lungs on both sides were firmly adherent throughout their

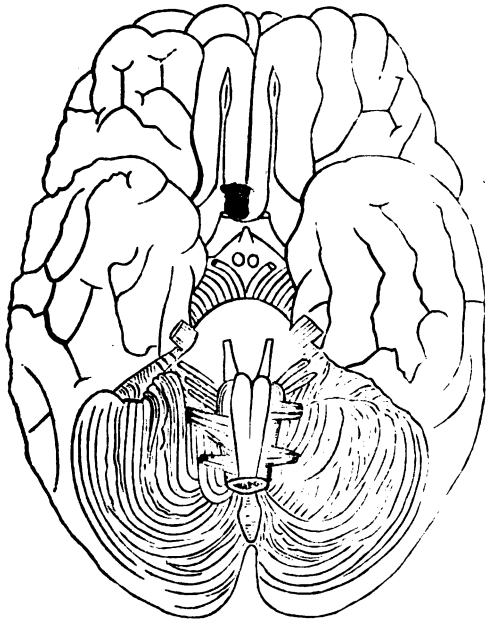


FIG. 1.—Showing tumor compressing optic nerve.

whole extent and infiltrated with pus, and tubercular matter was thickly and evenly distributed through them. A large abscess was found in the middle lobe of the right lung.

Upon examining the head, the eyelids were found glued together with a thick exudation. The calvarium contained two marked depressions on either side of the longitudinal fissure corresponding to the situation of Pacchionian bodies, and at these points the skull was very thin and translucent. The cavity of the skull contained several ounces of serum and the arachnoid was greatly thickened, so that it could be removed in large sheets like the lining membrane of an egg-shell, and was very thick and opaque, especially about the cerebellum and base of the brain. At the apex of the right middle lobe was a cyst containing about two drachms of serum, and at this point the convolutions were wasted, causing a marked inequality between the two sides. A small tumor was found just at the entrance to the right optic foramen compressing the optic nerve at this point, but not involving its substance.

This tumor was about the diameter of the nerve, and communicated with another tumor about the size of a bean, grayish pink in color, and situated in front of the optic chiasm in the right side of the longitudinal fissure. The latter was surrounded by a mass of softened tissue that was washed away by a gentle stream of water, leaving the tumor in a cavity the size of a chestnut, and showing as its only connection a small artery from the anterior cerebral. The surface of the tumor was uneven, and its appearance was as if it were covered with pale granulations. The whole substance of the brain was softened, and upon placing it upon its base, it spread apart, tearing through the central commissures nearly to the base. Another tumor was then seen on the right side close to the gyrus fornicatus, one and one-fourth by seven-eighths inches in diameter, and adherent to the membranes that dipped into the sulcus.

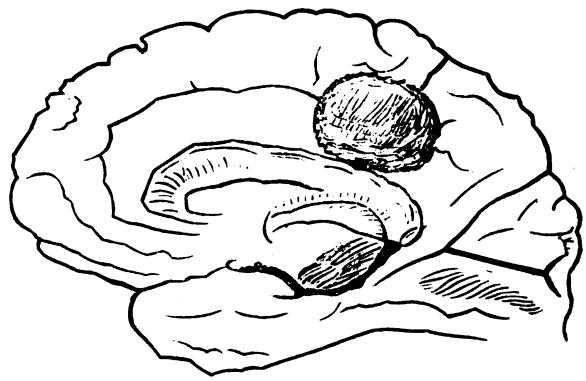


FIG 2.—Showing tumor on right side.

It encroached upon the right hemisphere, but was loosely attached to the brain substance, and did not involve the ganglia beneath it. The surface of the tumor was hard and nodulated, and when sawn in halves it disclosed a calcareous shell and an interior filled with dry, cheesy, and hard calcareous matter. At the base of the right corpus striatum there were evidences of a recent clot extensively involving that body, and this with the subsequent effusion was the immediate cause of death.

The case is interesting as showing the dissemination of caseous matter throughout the lungs, the brain, and the lymphatic glands and as being the probable cause of epilepsy. I have observed three other cases of cerebral tumor, in two cases causing epilepsy. One in a middle-aged man, in whom the tumor produced a series of convulsions continuing for several years, during which time he continued to perform his literary duties, though his mind became somewhat impaired before death; and one in a middle-aged woman who had convulsive seizures of the nature of epilepsy for many years, and upon

her death a very large tumor, about two inches in diameter, was found in the frontal lobes and lying upon the sella turcica; and in the third case the tumor was at the base of the brain between the pus and optic chiasm, producing epileptoid convulsions only for a short time before death.

INTERNAL DERANGEMENT OF THE KNEE-JOINT.

By J. J. BERRY, M.D.,

LATE INTERNE ST. FRANCIS HOSPITAL AND HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK.

In an interesting paper read at a recent meeting of the Academy of Medicine, Dr. Lente described a condition of the knee-joint which, to my mind, bears a strong resemblance to the injury indicated in the title of this article.

Various interpretations have been placed upon these less important accidents. Brodie attributed such symptoms to loose cartilages within the joint. Verneuil found similar signs of traumatism in rheumatic subjects. Hey has given a more satisfactory description than most of the causation of those symptoms which we so frequently meet with.

By internal derangement of the joint is meant an imperfect apposition of the articular extremities—a slight form of dislocation which is hardly enough marked to produce evident external signs, but is of sufficient gravity to demand immediate relief. Knott, in a paper read before the University Biological Society of Dublin, explains the nature of the lesion as produced by a combined twisting and lateral movement conveyed to the knee at a moment when the ligaments are in as lax a state as possible. As a result, the margin of the condyle is lifted over the edge of the semi-lunar cartilage. He has found, as an outcome of this displacement, two prominences: an internal, formed by the projecting lower margin of the internal condyle; an external, produced by the upper edge of the tibia with its attachment of semilunar cartilage. These two points are tender on pressure and, being readily distinguished, are of some diagnostic importance. That displacement of the cartilage can ever be produced by such incomplete dislocations there seems to be no direct evidence.

Very insignificant causes combine to produce this injury, most frequent among these being indirect violence, such as stubbing the toe while the limb is in a semiflexed position. The displacement may exist only for a moment, and may then be overcome by the attempts of the patient to recover his equilibrium or to stand again upon his feet. If, however, a proper apposition of the articular surfaces does not at once occur, then does pressure upon the cartilages and tension of certain ligaments produce the various reflex phenomena which are at times so persistent and troublesome. Even when spontaneous reduction takes place there may be resulting sequelæ, as stiffness and effusion.

Rotatory movements of the knee-joint, which are normally considerable, are liable to produce contusion of the synovial membrane and resulting inflammatory reaction. I have noticed in many cases of knee-sprain a small synovial effusion which usually disappears in a few days, even without treatment, but in certain cases there results secondary changes from which it would not be difficult to trace the pathological evidences of chronic synovitis. To determine whether an injured joint was previously in a healthy condition is at times difficult, for there are rheumatoid inflammations which progress insidiously until a blow or sudden wrench detaches a synovial concretion, or incites changes in the cartilage or synovial membrane, which render the character of the lesion at once unquestionable.

I have thought it less advisable to consider *en detail* the physical signs of these lesions, than to indicate in a very brief way the anatomical basis of symptoms which are not only protean, but sometimes contradictory.

South Norwalk, Conn.

A CASE OF SUDDEN DEATH AFTER CONFINEMENT.

By U. O. B. WINGATE, M.D.,

[WELLESLEY, MASS.

In The Medical Record for July 8, 1882, Dr. E. P. Hurd, of Newburyport, Mass., reports two cases of sudden death after confinement, one occurring in his own practice, the other in the practice of Dr. George W. Snow, of Newburyport, Mass. The following case occurring in my own practice may serve as a companion to the above named cases.

Early in the morning of July 12, 1880, I was summoned to attend Mrs. F—— in confinement. The lady was an American, twenty-six years of age, healthy and robust, weighing nearly two hundred pounds. She had given birth to four children at full term. Her children were all large at birth, none of them weighing less than eleven pounds. Some two years before this I had attended her in her fourth confinement, and delivered her of a child weighing twelve pounds. A year after I delivered her of the products of a false conception in the shape of a fleshy mole. On my arrival I learned that the patient had been in pain, more or less, nearly all night. Vertex presenting; os slightly dilated; parts moist and in good conditon. The pains were regular and of good strength. At ten o'clock A.M. a large bag of water had formed, which I then ruptured, and a large amount of water came away with each pain. At eleven o'clock A.M. the patient was getting very tired and asking for help. The head was high up in the L. O. A. position; os well dilated. I found the pulse showing marked signs of exhaustion, and the pains, though regular, were making no progress. Assistance at this hour of the day was not at hand; the day was excessively hot, and the patient refused ether. I at once applied the long forceps, and commenced the hardest task I ever undertook in the lying-in room. By the assistance of the husband, who grasped me about the waist from behind, my hands being wound by a towel to the handles of the forceps, I finally succeeded, at eleven thirty o'clock, in bringing into the world a dead female child which weighed seventeen pounds.

There was but slight laceration of the mother. Stimulants and ergot were administered; the placenta soon came away, and the patient rallied well. She seemed very cheerful and grateful that she had been delivered alive, and while I was working over her in arranging dry clothing, she raised a towel and wiped my face, which was dripping with perspiration.

I remained with her an hour and then went home to obtain some refreshments. I had been at home but a short time when a violent ring of my bell brought me to the door, where I met the husband,

who stated that his wife was dying. I hastened to her bedside, but a short distance, and found her dead. The nurse informed me that she was comfortable up to the time the husband came for me. She then suddenly complained of a sharp pain in the cardiac region, breathed very quickly, turned dark in the face, and at once expired. This occurred about two and a half hours after delivery. No autopsy could be obtained. I could but regard the case as one of cardiac embolism.

I refrain from commenting on the causes of this sad termination of life, as theory is far more rife than fact.

Reports of Hospitals.

ROOSEVELT HOSPITAL, NEW YORK.

SERVICE OF DR. W. H. THOMSON.

(Cases reported by HENRY LONG TAYLOR, M.D., House Physician.)

SINGULTUS TREATED BY NITRITE OF AMYL.

PATIENT, male, forty-one years of age, glass polisher, admitted June 26th, was in Roosevelt Hospital in March and April, 1881, with obstinate and persistent hiccough. Discharged cured at end of that time. No record found of treatment then employed.

Had been well till three weeks ago, when began to hiccough, and has kept it up day and night ever since. Keeps him awake at night, otherwise well. Hiccoughs several times a minute. Urine, 1,025, acid, no albumen. Bowels regular. No known cause. Does not know of other glass polishers having hiccough. Dr. Thomson ordered Paquelin's cautery applied along back of neck from third to seventh cervical vertebræ, and atropine, gr. $\frac{1}{60}$, injected into nape of neck. This was done several times, the cautery relieving him for a few hours; the atropine did not stop the hiccough. On June 29th and 30th, chloroform, ℥ xx.–xxx. were given. No relief.

Hiccough has stopped spontaneously for some hours several times, generally in early morning.

July 1st.—A pearl of amyl nitrite was inhaled with effect of stopping paroxysms immediately.

July 5th.—No recurrence since the one exhibition of amyl nitrite (July 1st), except a slight attack yesterday, which was stopped by the nitrite of amyl.

THE HARMLESSNESS OF HYPODERMICS.

Hypodermic injections of various substances are used in moderation in Roosevelt Hospital, according to indications. I never in my fourteen months' residence in the hospital saw them followed by any worse effect than a little local redness and induration, and this in only one or two instances. There have been given in the medical service during this period more than three thousand hypodermic injections of different substances, such as Magendie's solution, Magendie and atropia, atropia, Lente's solution of quinine, whiskey, digitaline and whiskey, ether, carbolic acid, etc., and these have not been followed by abscess in a single instance, and I can only remember one case where there was any inflammatory induration, and this seemed to be idiosyncrasy, as on using fresh solutions and clean needles, subcutaneous and parenchymatous injections both produced the induration, which, however, resolved.

A patient, male, aged ——, with spasmodic asthma, whose attacks can only be controlled by morphia, has had three hypodermics a day on the average (often six) for about thirteen months, certainly over one thousand hypodermics, and never has had the least local trouble. Parenchymatous injections are preferred and are practised in the majority of cases.

Our solutions are not always fresh, and often contain confervæ, and there is no special pains taken to clean the needles. Solutions over a month old and full of confervæ have frequently been used.

Our solutions of Magendie and atropia contain gr. ss. of salicylic acid to the ounce, and remain tolerably clear for several weeks. Does this prevent the growth of other ferments more nocuous than algæ?

ST. MARY'S HOSPITAL, LONDON.

CASES UNDER THE CARE OF MR. HAYNES WALTON, SENIOR SURGEON TO THE HOSPITAL.

CASE I.—*Extravasation of urine—Impacted stone.*—P. P——, aged two years, was admitted on October 29, 1881. He was brought to the hospital supposed to be suffering from rupture. The penis and scrotum were found to be enormously distended and presented a shining, semi-transparent appearance. His mother said that this had come on since the previous night and he appeared to have difficulty in passing his water. Had made water freely the night before.

October 29th.—Chloroform was administered and the prepuce slit up.

A small stone was found to be lodged just inside the prepuce. After much difficulty a catheter No. 2 was passed and the urine drawn off. Mr. Pye opened the urethra freely in the perineum. A hard deposit, supposed to be phosphatic, was found in the urethra, but could not be removed as it was close up to the bladder. Scrotum incised to allow drainage. Poultices.

October 30th.—More incisions made in the scrotum and one in the penis, which seemed to puncture the urethra, as immediately it was made there was a gush of urine. The perineal incision into the urethra was closed up. Very little urine passed until this extra incision was made into the urethra. Water only passed by making forcible pressure above the pubes. Poulticed.

October 31st.—Poultices continued and hot baths given. Urine continues to come away only on pressure over the bladder and only by the second incision into the urethra.

November 1st.—He seemed much better. Swelling subsiding and urine passes without pressure.

November 20th.—Poultices to be left off.

November 21st.—Water dressing instead.

November 26th.—Dry dressing.

December 1st.—General appearance improved. Intellectual faculties developing.

December 10th.—Swelling on back of neck on right side.

December 11th.—Poulticed.

December 25th.—Discharged.

CASE II.—*Phlebitis of leg—Popliteal abscess.*—W. E——, aged nineteen, his family history is good. Father living and mother died after her confinement. He is a tolerably strong, healthy-looking youth of fair complexion, rather thin. He has never had any illness to cause him to keep his bed. Present illness. About two months ago he walked

forty miles in eighteen hours, and at the end of his journey found his left heel to be very sore, but did not give up his usual work as a builder's laborer. On October 28th, he had been standing for several hours sifting some damp earth, and toward evening he found much pain in the left leg, accompanied with swelling just below the knee. At bedtime the swelling had much increased, as well as the pain, and he did not get much sleep during the night. On the 29th he put a linseed poultice on the leg over the seat of pain and sent for a doctor, under whose treatment he remained for a week. At the end of that time, finding he was no better, he came to the hospital and was admitted on November 3, 1881. He was found to have a hardening of the veins in popliteal space, a good deal of swelling and tenderness in the upper part of the calf of same leg. There was a small abscess in cellular tissue, which was opened, letting out a small quantity of matter. A poultice was then applied. He was unable to stand and the knee-joint was partly flexed. Tongue was coated and bowels confined. Temperature (evening), 99.6°. Diet simple. Beef tea O. j. Ordered, pil. hyd. c. col., gr. x., statim; mist. quinæ, ℥ j., t. d. s.; cataplasma lini.; pil. opii., gr. j., (at bedtime). The temperature rose to 100° on the 4th (evening), and 101° on the evening of the 5th. On the 6th it fell to normal and did not rise again.

November 6th.—Abscess in calf has been continually poulticed, but does not diminish in size. This morning it was cut into and about two ounces of pus were let out. A poultice again applied. The veins in popliteal space are still very hard and tender. Temperature last evening, 101.2°. This evening, 98°.

November 10th.—Since the abscess was last opened he has been feeling much better; he has very little pain now, the veins are somewhat hard still. There is no discharge now, poultices are discontinued. Tongue much cleaner. Bowels open. Temperature normal. The leg is still somewhat flexed at the knee-joint.

November 17th.—Veins are much softer and not so painful on pressure. The knee-joint is still somewhat flexed and he has pain if he puts the foot to the ground. The wound where the abscess was has entirely healed.

November 24th.—He is much better, has been up the last few days, sitting with his leg in a chair. He has very little pain now when he puts his foot to the ground.

December 2d.—He has been wearing a patella splint for the last few days, and has been walking about the ward a little each day, has no pain now, and the foot does not swell.

December 7th.—Discharged. He has quite recovered, but the joints are rather stiff. He still has a bandage on over the knee-joints.

Case III.—*Pelvic peritonitis and abscess in loin.*—P. F——, aged twenty-six years; married nearly two years; one child. Family history good. Always enjoyed good health up to the time of her confinement in February, 1881. Since then menstruation has never occurred, but she has had a continuous discharge, which has frequently been very foul, but more so for the last month.

Last July she felt a pain in right hip and leg as far down as the knee. At the same time she noticed a swelling in the right hip and groin which occasionally extended for some way down the thigh. She had a yellow discharge about two months before her confinement. The child was weakly and only lived five months. On manipulation of tumor, crepitus is felt, showing the presence of air in the tumor. She was admitted on October 31, 1881, temperature 100.6°. On November 8th the tumor was explored with a hypodermic needle and a small quantity of thick yellow pus and some gas drawn off.

November 9th.—An incision was made by Mr. Walton and a quantity of very offensive pus let out. Incision about three inches behind right anterior superior spine of ilium. Temperature (evening), 101°.

November 10th.—She feels very much easier. Temperature fallen to normal; 100.2° in evening.

November 26th.—Slight bagging has taken place just behind the opening. Temperature (evening), 103°.

November 29th.—Feels easier. A quantity of matter discharged from the opening enlarged by Mr. Wood. Temperature normal.

December 2d.—Feels much better. No pain.

December 4th.—Got up for the first time for an hour.

December 6th.—Discharge has increased again and more pain.

December 9th.—Better, very little discharge.

December 12th.—Continues to improve.

December 17th.—Discharged, cured.

Case IV.—*Dislocation of elbow and fractured humerus.*—C. R——, aged fifty-three, was admitted on November 19, 1881. He was in the hospital about seven years ago for an injury to his foot.

Present illness: he was knocked down by the pole of a luggage-van striking him on the right shoulder. He was thrown forward on his face, one of the wheels passing over the right arm and right leg. He was brought to the hospital at once and on admission was found to have fractured the shaft of the right humerus obliquely about the middle. There was also a dislocation of right elbow-joint "backward." The right foot was much buised, but no skin broken. There was a slight superficial wound on the inner side of right knee. He appeared to be in much pain. The dislocation was reduced by the house-surgeon. The arm was put up on an internal angular splint and he was put to bed with the arm raised on a pillow. He was not under the influence of drink when admitted.

November 20th—At 2 A.M. he had not had any sleep and was still in great pain, so he was given a hypodermic injection of morphia, gr. ¼, after which he slept for several hours. Ordered pil. hyd. c. col., gr. x., statim.; haust. alb., ℥ ij. Diet simple; milk, O. ij., beef-tea, O. j.

November 21st.—He seemed comfortable and does not complain of much pain. There are several large blebs on different parts of the arm. The whole arm and hand are swollen but not much discolored. He slept tolerably well last night. Pills acted very well. Tongue clean. Temperature, 99°.

November 23d.—The arm and hand are more swollen and more painful. The splints were removed. There were several large blebs, some of which had burst, leaving a raw surface. There was not much displacement of the bones at the seat of fracture; so the sore surface was powdered with starch, and the arm rested on a pillow and kept steady by sand-bags.

November 25th.—The swelling has much subsided and the sore surfaces are drying up. They are now dressed with zinc ointment and the arm still kept on a pillow. He sleeps well and has no pain except when the arm is moved.

November 30th.—The sore places have, with the exception of two, healed over, and the swelling has nearly all subsided. The last two days he has been allowed to sit up in bed with the fore arm in a sling, and the elbow allowed to drop. This afternoon, being ten days since the accident, the arm was again placed on an internal angular splint, and on the outer side an india-rubber splint was moulded to fit the arm, reaching from the top of the shoulder to the wrist, holes being cut in the india-rubber over the sore places. The two splints were then strapped on the fore-arm as far as the elbow and a bandage applied. Extension was then made so as to prevent overlapping of the fractured ends of humerus and the upper angles of splint, then firmly bound together. External to the india-rubber splint an angular tin splint, about two inches wide, was strapped on, so as to strengthen it, and the limb well bandaged, leaving open the two sore places so that they may be dressed each day.

December 1st.—He has had a good night and is feeling very comfortable this morning. The arm is not swollen and appears to be in good position. The discoloration of foot has entirely disappeared and the sore place on knee has entirely healed.

December 4th.—Vaseline ordered to be applied.

December 7th.—Arm is still comfortable and not much swollen. The sore parts are dressed daily with vaseline. There is not much discharge from them now. He has been up each day since the 3d for a few hours. Sleeps much better. Appetite good.

December 10th.—The tissues on front of elbow-joint are looking much inflamed and there is much swelling around. Poulticed since yesterday. The other small wound on back of arm is healing up fast. Has had two rather sleepless nights and the arm has been rather painful. Bowels regular.

December 18th.—Sore parts on front of elbow less inflamed and not so painful. There is a large superficial slough which is getting detached. Poultices continued.

December 22d.—Bandages and splints were all taken off this morning. There is good union of the fractured humerus, and the bones are not overlapping. It is in very good position. The slough at elbow has partly come away. A clean padded angular splint was applied to the inner side of arm and the gutta-percha to the upper arm as before. He is about the wards every day and makes himself useful with the other hand. Appetite good. Sleeps well. Bowels regular.

December 30th.—Splints taken off this morning. The wound at elbow is still poulticed, it is getting smaller. There is still some of the slough remaining. Wound looks otherwise healthy. A new splint composed of brown paper was moulded to the upper arm, so as to give support to the part that has been fractured. The angular splint has not been re applied but the arm kept in a sling. The elbow-joint is inclined to get stiff. He is quite well in general health.

January 5, 1882.—Discharged cured.

Vivisection Laws in England.—The absurdity of the English law against vivisection is well illustrated by a remark of Sir James Paget. He says: "I may pay a rat-catcher to destroy all the rats in my house with any poison he pleases, but I may not myself, unless with a license from the Home Secretary, poison them with snake poison."

Progress of Medical Science.

Orthopœdic Deformities of Infancy and Early Childhood.—The July number of the *American Journal of Obstetrics* contains the first of a series of articles upon the above subject, by Dr. Chas. F. Stillman, prepared as practical guides for the practitioner in the treatment of these conditions. The first subject is that of "Infantile Talipes Varus." Dr. Stillman condemns the practice of indiscriminate tenotomy, asserting that no proper excuse for its employment exists, except when *permanent* curative effects are expected to follow the *permanent* weakening of the muscles which tenotomy produces. The expediency of this operation is a matter requiring judgment and experience, because if the condition contra-indicates the operation, the temporary relief of the deformity is sure to be followed by the relapse seen in so many cases. Dr. Stillman advises the use of other means at the outset of treatment, tenotomy to be considered as a *dernier resort*; also the gradual reduction of the deformity by the hands of the practitioner, an assistant putting the parts upon the stretch meanwhile, the foot between such attempts to be held in the plaster-of-Paris and adhesive plaster dressing, or in an accurately moulded felt splint, to retain what is gained at each reduction. When the foot can be placed at its natural angle with the leg, elastic power is to be used. An outwardly inclined flat spring attached to the side of the baby's shoe is employed to keep the foot from turning under, while appropriate rubber cords are attached from spring to shoe. By means of this simple splint the deformity is more quickly cured the more exercise the little patient is allowed to take. Dr. Stillman depreciates the heavy, cumbersome, split-soled club-foot shoes now in use, as adding weight and incorrect mechanism to the existing difficulties of the deformity, and criticises the Barwell system of elastic cords as being injurious to the nutrition of the muscles of the leg, and not fulfilling all the mechanical indications. The various procedures for the successful treatment of the condition are detailed with the exactness of experience, and will prove of practical service to the practitioner. In regard to bow-legs, which is the next subject considered, Dr. Stillman advances some original ideas regarding its nature and treatment which are well worthy of attention. The application of spring bows as an element of treatment in these cases is advocated and practically considered, the centre of the bow of the spring to be placed against the centre of the bow of the leg, thus opposing one curve to another. This forms a light and effective brace, which is more valuable than the rigid braces now employed, because more physiological. The paper is illustrated by several woodcuts.

Treatment of Gonorrhœal Orchitis by Position and Laudanum Embrocations.—Dr. Rocha (*Riv. Ital. di Ter. e Igie.*) has obtained very happy results in the treatment of gonorrhœal orchitis. He places his patients in the dorsal or lateral decubitus, and elevates the testicle gently by a pad which adapts itself to the movement of the patient. Every two hours he applies to the affected member an embrocation containing five to eight drops of Sydenham's laudanum. Under this treatment, orchitis, which has begun with the greatest intensity and acuity, disappears in eight, and sometimes in

four days. In the subacute and chronic forms, in which there is no pain, laudanum invariably produces favorable results with safety and speed. Testicular induration, ordinarily of slow resolution, has been observed to disappear entirely under the influence of laudanum, in fifteen days. Thirty cases have been cured in this way without general symptoms, due to absorption of the drug. A slight somnolence, easily yielding to coffee alone, was observed. Although Dr. Rocha does not pretend to explain the therapeusis of laudanum in orchitis, he thinks its action is altogether local. Alimentation is to be regulated according to the degree of the fever.—*La Cronica. Med.*, June, 1882.

A Good Way to Obtain the Juice of Meat.—M. Stanislas Martin (*Bull. gén. de Thér.*) recommends the following convenient and cheap procedure: Take of beefsteak one kilogramme, chop it, and reduce it to a thick paste in a mortar, then add gradually 250 grammes of warm bouillon, or, in default of this, ordinary water. Stir the mixture, place it in a piece of linen and express it. The juice obtained is evaporated in the *bain-marie* until the 250 grammes of water or bouillon added have been dispelled. If the operation has been well conducted, and the temperature has not been too high, the microscope will discover in the cold juice all the blood-corpuscles which constituted a part of the meat, and also osmazone and other soluble principles. The gentle heat of the *bain-marie* will have removed the repugnant odor of blood without impairing the nutritive value of the juice. In order to prevent rapid alteration of this bouillon, two modes of procedure are recommended. The first consists in pouring the juice into small flasks warmed in the *bain-marie;* when the water becomes too hot to the touch, they are withdrawn and tightly corked. Or, secondly, if no contra-indication exist, a syrup may be made as follows: add to 200 grammes of the juice 380 grammes of sugar. Keep the syrup thus prepared in a vessel protected from the air.—*Revue Medicale*, June 24, 1882.

Treatment of Serpents' Bites.—Dr. Monteiros publishes an article upon this subject in the *Gazeta Medica da Bahia* of March, 1882. He refers to the important discovery of Dr. de Luceda in regard to the value of the permanganate of potassium, but indicates a line of treatment to be followed in the absence of this remedy. Drs. de Miranda and Jardine, his colleagues, he states, use brandy in sufficiently large doses to produce well pronounced stimulation. Dr. Miranda alternates alcohol with two or three drops of ammonia in sweetened water. Dr. Monteiros employs the alcoholic potion of B. Toll, administered in drachm doses every hour, or in two-drachm doses every two hours, alternating with two to three drops of ammonia. He has never had a fatal case with this treatment, nor have his colleagues had any. The wonderful efficacy of the roots and leaves of many plants popularly used in serpents' bites, he attributes to the alcohol with which they are administered. He speaks of the recognized good effects of energetic exercise as antagonizing the action of the poison by increasing diaphoresis and stimulating the heart. The fundamental principle of treatment should not be lost sight of, namely—alcohol should never be used except in therapeutical doses. The action of alcoholics upon the nervous system clearly establishes the vital differences between the effects of therapeutical and toxic doses. Alcohol neutralizes the serpent's poison, not as a proper antidote, but because it stimulates the secretions on the one hand, while on the other it arouses the nervous system and prevents collapse. Todd's formula, employed in various morbid affections, is to be preferred.

Muscular Action in Pathology of Hip Disease.—In the July number of the *New York Medical Journal and Obstetrical Review*, Dr. A. B. Judson, Orthopædic Surgeon to the Out-Patient Department of the New York Hospital, discusses some points in the morbid anatomy of hip disease, with special reference to the supposed effect of muscular contraction in promoting the progress of pathological changes in the articular structures. A careful review of the most important observations on record leads him to the inference that the crowding of the articular surfaces together by muscular action has no such effect. What mainly points to this inference is the fact that the primary lesions are not usually to be found in the superficial structures that enter immediately into the formation of the joint, but rather in the cancellous texture of the bones. This conclusion, however, casts no doubt upon the utility of the extension treatment, but simply leads to this interpretation of its beneficial action: aside from the fact that we are compelled, empirically, by reason of its anodyne quality, to use traction, there is ample rational ground for its use. Traction, however applied, is unavoidably accompanied by fixation. The most efficient apparatus for the application of traction is, at the same time, the most efficient means known to surgery for the solution of that difficult problem, the immobilization of the hip-joint; and, finally, immobilization is indicated by every feature of the pathology as revealed in morbid specimens.

Action and Uses of Antipyretic Medicines.—Prof. Binz expresses his views on antipyretics as follows: In the present state of our knowledge there are two modes in which antipyretic medicines may be conceived to operate; first, by increasing the discharge of the pyrexial heat; secondly, by checking its production. The quantity of heat discharged may be augmented by direct withdrawal (tepid water), or by facilitating the circulation through the skin (digitalis, cutaneous irritants). The production of heat may be lessened by repeated cooling of the surface, and especially by the internal use of antizymotics.

Febrile diseases commonly owe their origin to the introduction and rapid development of substances akin to ferments. Several of these have been shown to resemble yeast in being low vegetable organisms, or derived from such organisms. They enter the glands, where they undergo multiplication, increase the metabolic processes, generate products of decomposition which exert a paralyzing action on the nervous system, and raise the standard of temperature throughout the body. Owing to impaired action of the heart in certain stages of the disorder, or to contraction of the cutaneous vessels, the skin becomes anæmic, and gives off less heat than usual. The internal temperature rises accordingly. Quinine, our chief antipyretic, acts by directly combating the efficient cause of the disorder, and by checking the abnormal metabolism going on in the body. The nervous system takes no part, or only a secondary part, in this operation. In intermittent fevers quinine prevents the paroxysms by attacking their infective cause. The paroxysms are not the essence —the substantive element—of the disease; they are

only a symptom of it. The substantive element is the poison deposited in the colorless corpuscles of many organs, especially the spleen. There are fevers without paroxysms, and paroxysms without fever. It is just those intermittent fevers which run their course without paroxysms that are the most malignant. The malarial poison rapidly causes disintegration of the tissues and the blood, and so paralyzes the nerve centres. The reduction of acute splenic tumors by quinine depends upon the adverse influence exerted by the alkaloid on the infective poison to which the morbid over action of the spleen and its consequent enlargement are due. "*Cessante causâ cessat effectus.*" Even a healthy spleen may be reduced in size by large doses of quinine, the alkaloid vigorously checking the oxidation of its principal elements, the colorless corpuscles. Quinine has no direct influence on the vaso-motor nerves. Quinine attacks the malarial poison with especial energy. On this fact depends the so-called specific action of quinine on intermittent fevers. The same relation, but in a minor degree, subsists between quinine and the infective poison of enteric fever, between mercury and iodine and the poison of syphilis, between salicylic acid and the 'irritant' in acute articular rheumatism. An antipyretic which, in one disease, instantaneously arrests the fever, may be wholly powerless in another. The difference depends on the fact that the various antizymotics act very unequally on the individual schizomycetes and ferments; one will paralyze them rapidly, by another they will hardly be affected. The past history of therapeutics and recent achievements in the domain of etiology and pharmacology, entitle us to assume that, by persistent scientific inquiry and practical observation, we may succeed in discovering a specific antidote for every species of infective or septicæmic malady.

Treatment of Chronic Dysentery by Large Enemata of Nitrate of Silver.—In the *Lancet*, April, 1882, Dr. Stephen Mackenzie reports four severe cases of chronic dysentery, which were rapidly and effectually cured by one, or at the most two, injections of nitrate of silver, in the proportion of one drachm of the nitrate to three pints of water. Twenty years ago this plan was much more frequently employed than it has been of late years. It was then found to be equally efficacious in acute and in chronic cases. In the *Lancet*, June, 1876, a case is reported in which several American medical men introduced a speculum into the rectum under anæsthetics, and freely cauterized the mucous membrane as high as they could reach, and with marked success.

A Painful Affection of the Wrist.—In the July number of the *New York Medical Journal and Obstetrical Review*, Dr. Edward H. Bradford, Surgeon to Out Patients, Boston City Hospital, relates three cases of a painful affection of the wrist, the features of which were: pain referred to or most severe in the middle of the carpus; slight swelling; an absence of constitutional disturbance, and with no interference, or but partial interference, with motion of the articulation between the carpus and the radius and ulna. The symptoms were relieved by fixation, and recovery took place finally after a period of rest. Judging from analogy, Dr. Bradford remarks, it seems probable that the cases here reported were similar to a degree to a synovitis of the medio tarsal joint, described by Gosselin under the term tarsalgia adolescentium; differing somewhat in their course from the fact that the wrist, a part easily immobilized from the first, and not the tarsus, was affected. Leaving out of account the smaller synovial membranes of the carpus—*i.e.*, those between the pisiform bone and the cuneiform, the trapezium and the metacarpal bone of the thumb, the ulna and the fibro-cartilage at the joint—there are two large synovial sacs, viz., that between the main carpal bones and the radius and cartilage covering the ulna, and that between the main bones of the carpus, of which the os magnum is the larger and central bone. From the symptoms in the cases reported, the author thinks that the inflammation was one affecting this latter synovial sac, and limited to this alone, and that they may therefore be termed cases of synovitis of the carpus.

The Segmental Nature of the Spinal Cord.—The spinal cord may be regarded as composed of a series of segments, indicated by the pairs of spinal nerves. According to Lüderitz (*Lancet*, July 8, 1882), this view of its structure is morphologically correct. The spinal cord of the ringed snake shows a slight rounded swelling opposite each pair of nerves, which lies above the junction of the respective vertebræ, and constantly corresponds in height to the middle of a segment. The enlargement is due chiefly to that of the gray substance, but partly also to that of the white, and to an increased size of the so-called lateral group of cells. The demarcation between the segments cannot be exactly determined, but they are longer in the middle of the cord and shorter toward the extremities, especially toward the basal portion. Similar segmental swellings are to be discerned in the spinal cord of the rabbit, even on naked-eye examination. Careful microscopical measurements of the areas of the several constituents of the cord in transverse section show an analogy between these elemental segments and the swellings of the cervical and lumbar enlargements. The middle part of each segment, for instance, bears a similar relation to the extremities of each segment, when the area of the constituent columns is compared. The increase in size at the middle of each segmental swelling is greater in the transverse than in the antero-posterior diameter. The gray substance is enlarged in all directions, but especially in width. The spinal cord of man, however, presents no segmental swellings, and its elements can only be recognized by the intervals between the series of nerve-roots which arise from it. These intervals are larger between the posterior roots than between the anterior, being greatest in the middle and lower dorsal regions.

Extirpation of Organs and Tumors of the Abdomen by Means of the Elastic Ligature.—An important communication on a new method of operating has just been made by the gynecological clinic of Professor Hegar in Freiburg. It would seem that a means has been found by which total extirpation of organs of the abdomen, *e.g.*, the spleen, kidneys, perhaps even of the liver, can be undertaken without very much danger. Hegar was led to use the elastic ligature in the treatment of intraperitoneal fibroid pedicles by the very favorable results he previously achieved in thus treating extraperitoneal fibroids, the danger of hemorrhage from the pedicle being by this means entirely excluded. Kasparzik, his assistant, in a communication to the *Berl. Klin. Woch.*, No. 12, 1882, has published the results of experiments upon animals, which consisted in placing pieces of elastic tubing, previously

disinfected, in the peritoneal cavity of a rabbit, and killing the animal five weeks later, when it was found that the elastic had become fastened to coils of small intestine by fibrous tissue, but not a trace of suppuration was visible. Repetition of this experiment on other animals gave the same result; therefore it was held that the elastic ligature was very well borne by the abdominal cavity as a foreign body.

A second series of experiments consisted in the tying of pieces of omentum, uterus, spleen, liver, and kidneys, partly with elastic tubing, partly with solid india-rubber ligatures, the stumps being either cut off or burnt with the thermic cautery. The results were most satisfactory in the case of the omentum and uterus, especially with the thin india-rubber ligature, which did not cut its way through the tougher tissues as it did in the case of the spleen, where much better results were obtained by the tubing. In a dog, half the spleen was extirpated, and an elastic tube put on the pedicle, which was then cauterized. Five weeks afterward, on opening the abdomen, a coil of small intestine was found closely adherent around the stump. On removing this, the ligature was found lying in a little cavity, above adhesions to the stomach. Another dog was at the time of the report still running about with one-half of his spleen tied with the tubing, the other with the solid ligature, and was to be killed later on, in order to observe the condition after a longer period of incarceration.

The liver and kidneys have not been successfully treated as yet; but Hegar is of opinion that more caution in the degree of tying and in the selection of proper tubing will later lead to success.

From these experiments, it is evident that uterine pedicles can be treated without danger by the elastic ligature, which has here to deal with a firm tissue, which can be securely tied without leading to cutting through of the constricted portion, even the ligaments being capable of being treated in this manner. Kaltenbach, at the advice of Hegar, sank the pedicle of a fibroid, secured with an elastic ligature, into the peritoneal cavity after all the most carefully applied sutures had failed to control the hemorrhage; and the patient, twelve days after operation, was progressing favorably, the temperature in the vagina being 101.1° F. Hegar uses a particular instrument for the purpose of easily controlling the amount of constriction, which is a forceps with smooth blades and rounded edges, having a spring catch to fix its jaws. For temporary ligature, this fixation would be sufficient; for permanent, it is necessary to fasten the two ends behind the forceps with a wire or silk thread, then to remove it and cut the ends short, the rubber piling itself in front of the constricting wire, and thus precluding the possibility of slipping.

THE TREATMENT OF ERYSIPELAS.—From careful study of, and extended experience with erysipelas, Dr. Lydston (*Chicago Med. Journ. and Exam.*, July, 1882) feels justified in framing the following conclusions:

In the treatment of erysipelas, in all its forms, we have to consider: First, the constitutional condition which may have predisposed to the disease; second, the lesion which has acted as its exciting cause, if the inflammation be traumatic; third, the tendency to local destruction of tissue and the formation and burrowing of pus; fourth, the tendency to the typhoid condition, proportionate to the severity of the disease; fifth, the danger of septic absorption and toxæmia; sixth, the danger of propagation by contagion; seventh, the liability to serious deformity from cicatricial contraction.

1. The first indication is to be met by measures tending to correct the cachexia present, if possible. 2. The second, by careful attention to the wound, and rigid antisepsis. 3. The tendency to local destruction of tissue is to be combated by free incisions adequate to relieve all tension, and the application of hot dressings to maintain the vitality of the part and promote absorption of inflammatory exudate, and also to relieve the pain. The possibility of pocketing and burrowing of pus should be prevented by immediate incision into all purulent collections. 4. The supervention of typhoid symptoms should be prevented, if possible, by proper analeptic and tonic measures, and the liberal use of stimulants. 5. The fifth indication calls for perfect cleanliness and prompt removal of dead tissues which might excite decomposition of the discharges and consequent septic absorption, with the adoption of antiseptic dressing. 6. Transmission of the disease should be prevented by strict isolation of the affected, cleanliness, both in regard to the seat of disease and the instruments used, and on the part of the attendants, with the conscientious use of antiseptics. 7. Deformity may be prevented by careful management of the ulcers resulting from the disease, and the judicious use of skin-grafting. Various mechanical contrivances may be necessary in certain situations, to prevent contraction.

IMMEDIATE UNION AFTER CIRCUMCISION FOR PHIMOSIS COMPLICATING SIMPLE CHANCRE.—M. Aubert reports (*Lyon Méd.*, No. 9, 1882) six cases in which he obtained primary union after circumcision for phimosis with soft chancres. In two cases there was œdema, and in one lymphitis, and abscess of the penis. The following is M. Aubert's method of operating. All the surrounding parts are cleansed with carbolic lotion. The penis is then passed through a hole cut in a large sheet of India-rubber sheeting, so that discharge and blood may not collect among the pubic hair, and so become a source of reinoculation of the wound. The patient is then anæsthetized, and all the sores which are within reach are touched with the thermo cautery. This having been done, the prepuce is divided at one or more places (several shallow cuts being better than one long one, in order that the incisions may all be included in the subsequent circumcision wound), until it can be fully retracted. The parts are then again washed with carbolic lotion, and all the remaining chancres are cauterized. The operator and his assistants now cleanse their hands, and circumcision is performed with fresh instruments and clean sponges, etc. Lastly, the edges of the wound are united with sutures in the ordinary way. No reinoculation of the wound occurred in any of the six cases; and the author suggests that, if his method of operating be adopted, circumcision is applicable not only to bad cases, but also to those where phimosis is the only complication.

EFFECTS OF MALARIA ON MAN.—In the Croonian Lectures, delivered this year by Sir Joseph Fayrer, the effects of malaria are described as follows:

In addition to the direct effects of malaria, a diathetic condition seems to be established which modifies other diseases. The effects of malaria are, indeed, most protean in form, not only in its own definite and well marked pathological processes, but

it stimulates others. The stupor of typhus, the collapse of cholera, the high temperature of isolation, the sickness of an irritant poison, the convulsions of epilepsy or of dentition, may occur in the pernicious forms. It induces anæmia and general cachexia, with structural changes in the liver, spleen, or other viscera, neuralgia, asthma, and various other symptoms of disturbed innervation and sanguification, and it also appears to be in close etiological relation with dysentery, cholera, diarrhœa, beriberi, hydrocele, elephantiasis, bronchocele, and hepatic disease. Whatever its nature may be, its action on the human economy is very striking; it affects the central nervous system, causing disturbance of vaso-motor action, paroxysms of fever, and congestion of the abdominal viscera, which may become periodic in recurrence, or pass on to structural changes in the liver and spleen, or intestinal mucous membrane. No one can have resided long in a malarious climate, such as Assam, without observing the cachectic, deteriorated aspect of the people, who, although they may never have had a single attack of fever, scarcely feel ill, and would resent being told so, are yet victims to the insidious action of the poison, and present evidences of anæmia, degenerate tissues and chronic visceral disease.

Voluntary Drunkards and Dipsomaniacs.—The difference between voluntary drunkards and dipsomaniacs consists not only in the inherited neuropathic condition of the latter, but in prolonged vaso-motor disturbance, which often persists after a spree in the latter, whereas in the former the normal vaso-motor condition affecting the cerebral circulation and cell activity is soon regained, enabling the one to abandon drink, if he will, while the other is still irresolute and unstable. Cardiac gangliopathic states, too, are often persistent, in our experience of dipsomaniacs, so that an increased heart activity and more than naturally rapid pulse are second nature to these unfortunates.

Dipsomaniacs are accordingly not safe against repeated sprees, notwithstanding their promises of reform, for many months after the liquor of the last indulgence is entirely out of them, whereas the common drinking man, without the fatal heritage, who indulges from appetite alone, may be, if the incentive to self-restraint be strong.

It is therefore only folly to create and endow reformatory hospitals for dipsomaniacs without legal provision for prolonged detention which cannot be evaded—not less than a year in all cases, often longer. The links of the chain of heredity are generally too strongly forged to be broken so easily as some imagine.

It is an organic slavery that the State undertakes to free these unfortunates from when it organizes hospitals for inebriates, and it should take care of the slave till the master relinquishes his hold, and then guard the slave in his freedom ever after, even though the right of *habeas corpus* be permitted only such a conditional hold as will not re-enslave whom the State proposes to make free, that he may enjoy the benefits of true life, liberty, and the pursuit of happiness, and bless and care for those whom he may be bound in law to care for and support, but whom he does not, and cannot take care of and maintain in his pathological thraldom.—*Alienist and Neurologist*, July, 1882.

The Assimilation of Fat.—Most physiological text books teach that the fat of the body is not derived directly from the fat of the food. But from statistical analysis Hoffmann, according to the *Lancet*, has arrived at the conclusion that the formed fat of the animal body arises not only from heterologous elements of the food, but also in part, at least, from ingested fat. Radzcejewsky concludes that the special destination of this fat is the intramuscular adipose tissue. A series of investigations, undertaken by Lebedeff in the clinical department of the Pathological Laboratory at Berlin, leads him also to the conclusion that the ingested fat is deposited unchanged in the fatty tissue of the body. Two dogs were kept fasting for a month, losing in the time about forty per cent. of their weight. Previous experiments have shown that under these circumstances all the fat of the body disappears. The dogs were then fed on a diet which consisted of large quantities of fat foreign to their own nature, and a small quantity of flesh. Both dogs regained their normal weight in three weeks, and were then killed. One had been fed on linseed oil, and from its tissue was obtained more than a kilogramme of fatty oil, which did not become solid at the freezing-point of water, and which corresponded closely in chemical characters to linseed oil. The second dog was fed on mutton suet, which had a boiling-point about 50° C., and in its body, in the muscles, about the internal organs, and beneath the skin, a form of fat was found which was almost identical with suet. The organs of each dog were free from disease. Thus it would appear that ingested fat, even such as is foreign to the individual constitution, may yet become transformed directly into the fatty tissue of the animal. Other experiments of the same investigator seem to show that this is true also of milk fat.

The Pyrogallic Acid Treatment of Phagedenæ.—The application of pyrogallic acid to phagedenic chancres is followed by such excellent results that we frequently return to the application used by M. Vidal during his service. There were in the ward two cases in which the phagedenæ had attained considerable size, and two or three applications of the pyrogallic acid sufficed to completely arrest the extension of the lesion. Two days later Vidal practised auto-inoculation in these cases and the result was negative; he has, in fact, been able to demonstrate that the liquid secreted from the wound after the use of the acid loses completely its virulence. These tests can now be made with impunity, because we have in the pyrogallic acid a means of stopping at once the progress of any injuries that might be produced. The application of the pyrogallic acid gives the wound a blackish color, about which there need be no concern. It should also be mentioned that this treatment induces about the base of the sore a slight induration which greatly resembles that observed in the syphilitic chancre, and might easily lead to error if one were not informed of this result. In cases where the wound was rather large and presented numerous irregularities or cavities, necessarily attended with considerable difficulty in applying the remedy to all its parts, instead of applying the salve he ordinarily used, M. Vidal makes application to its surface of a powder composed of one part of pyrogallic acid to four parts of starch. This application is renewed morning and evening; two successive days of the treatment generally being sufficient to completely modify the phagedenic character of the wound. The treatment is then continued by means of the subcarbonate of iron.—*Journal de Med. et de Chirurgie.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, August 26, 1882.

THE BRITISH MEDICAL ASSOCIATION.

The fiftieth annual meeting of the British Medical Association, which was held in Worcester, England, during the second week of August, was an occasion of more than ordinary interest to our transatlantic brethren. In another place will be seen a report of some of the more important proceedings received from our special correspondent up to the time of going to press.

It was determined by the members that this year the semi-centennial jubilee should be celebrated, and the place of meeting was appropriately selected as being that in which the founder of the Association, Sir Charles Hastings, lived and worked during his distinguished professional career. Consequently, most of the addresses treated of themes retrospective in character, and drew lessons therefrom for the future.

Regarding the Association itself, there is certainly nothing which can show more emphatically the results of concerted effort and singleness of purpose than are manifest in its present large membership and extended influence. Fifty years ago, with a view of uniting the profession in an active body, a small band of but fifty members assembled under the leadership of Sir Charles Hastings—the Connollys, Barlow, Kidd, Hodgson, and others. From such a beginning, it has grown to be one of the largest, most powerful, and most thoroughly representative scientific associations in the world, with branch organizations in every part of the United Kingdom, and with a membership of nearly ten thousand medical men.

The attendance at the meeting was large, and the proceedings were generally of an harmonious character. Most of the discussion in open session referred to matters more directly connected with the business affairs of the Association, the arrangement of its council of government, questions of ethical discipline, and the management of its official organ. But everything seemed to be satisfactorily settled in the end.

It will appear strange to us here, at least such as are interested in the smooth working of societies, that it is not considered necessary for the president of that organization to be ex-officio member of any of the committees. Not that such an officer is expected to be present at the meetings of these committees, but that as the head of the society, his advice on matters of importance should be sought, and his opinions respected. But there is likely to be a change in this matter in future.

In view of the feeling manifested when Dr Fothergill's motion concerning an election of the editor of the *Journal* was brought up, it would seem that some of the members are not satisfied with the manner in which that periodical is managed. Why such a feeling should exist it is difficult to understand here. The present editor has made the *Journal* what it is, and any change which could be contemplated would certainly be for the worse. It is fortunate for the Association, as well as for its recognized organ, that the able management of the latter was not interfered with.

As might have been expected from the doings of the Association last year, the homœopathic question was again brought to the surface of discussion. The debate upon the suggestions offered by the Council was quite animated, the general sense of the meeting being very properly adverse to the recognition of homœopathy as such. But there was no desire to make martyrs of any members of that sect, who might already be members of the Association, by expelling them. Hence, even among the more conservative members, there was a desire to oppose the resolution having such an end in view. The principal concern was in preventing the admission of declared Hahnemannites. This, it was shown, could be easily done, with a proper regard for the rights of all concerned. Also that the Council had the power, by a two thirds vote, to expel a member for any cause, subject to confirmation at the next annual meeting. The Association was willing to leave the responsibility of judging individual cases and acting thereon to the Council, and rejected the expulsion clause accordingly. In all this a becomingly liberal spirit was manifested.

The addresses delivered in the General Session and before the sections were elaborate affairs, and were evidently prepared with great care. It must be acknowledged that the educated Englishman has a becoming pride in doing such work well. He always dignifies his subject with an importance which he instinctively feels is due to it. Hence there is much latitude for the display of fine rhetoric and more than average eloquence. In these respects the addresses fully came up to the English average

of perfection. The choice of subjects was, however, quite limited. Each orator felt that the occasion demanded some report concerning the history and progress of medicine during the half century just passed. But the manner of treating the topics was varied, and in so far interesting. It is instructive to follow the speakers in their various trains of argument, showing the different radical stages of evolution of medical thought, from the time when venesection was the ruling treatment for all diseases, until the present, when the lancet is almost a forgotten instrument, and when other and more rational systems prevail. And yet all these changes in opinion followed the natural law of human thought. No old doctrine was overthrown before the medical mind was prepared for it, and saw clearly the line for a new departure. The extremes of opinion in one direction in the natural course of events reached a precisely opposite point in another. Hence, when venesection lost favor, it was deposed for a decidedly inactive method of treatment. Then the *vis medicatrix naturæ* was studied in connection with the natural history of disease. Expectancy became the rule in the treatment of disease, and in its turn the reactionary period is manifesting itself in the more thorough cultivation of therapeutics as a science. We are going through at present that period of conservatism in the study and treatment of disease which enables us to steer judiciously between the sins of omission and those of commission. We are learning what diseases can be shortened, or at least mitigated in severity, and are discovering more and more the special indications for the use of particular remedies. And it is such a history of progress which has been presented to us in the addresses delivered before the Association.

SANITARY INSPECTION OF HOTELS.

The occurrence of typhoid fever in one of the seashore hotels, and the consequently precipitate departure of the guests, carries with it a lesson which has many phases of significance to all who are concerned in the sanitary condition of health resorts. It is so often the case that the last straw makes the burden unbearable that no one is surprised, under the present circumstances, to find the patrons of the establishment resorting to the last expedient for safety. Although such a measure is inconvenient for both parties, it is the only practical way of enforcing upon landlords generally the necessity of leaving nothing undone that will tend to protect the health of their guests. It now seems that it is not enough that the hosts should take ordinary sanitary precautions, but that they should guarantee themselves against pecuniary loss by reducing the chances of sickness among their patrons to absolutely unpreventable causes. The experiences at Seabright have placed the question, at least with hotel proprietors, upon a purely business basis. And here, as far as they are concerned, we may safely allow it to rest, with reasonably good expectations for the future.

We cannot undertake to say whether or no the cases of typhoid had their origin in the hotel, but the reports of inspectors tend to show that there were many defects connected with the drainage of the establishment which might easily render the origin of the disease possible, and the spread of the latter reasonably certain. That it did not go farther is due to the proprietor, who promptly appreciated the danger, and at once took the usual means to avert it. But what concerns the public most is the necessity of preventing these occurrences.

The hotel proprietors are evidently ready to receive suggestions. With them the question of the actual sanitary requirements of their houses must be one of prime importance. This must apply particularly to the so-called health resorts hurriedly and cheaply built for the accommodation of summer guests. And there is room for the greatest amount of improvement in a very large proportion of them.

There is no reason why the different State Boards of Health should not devise some practical means to this end. The landlords, with the best of intentions, may not be able to act intelligently in different cases. The health boards should furnish them with all desired information, and should then insist upon an enforcement of all the necessary sanitary regulations. This can be done only by regular inspection of the premises by official experts, and by the granting of a certificate of such inspection accordingly. It is just as necessary to guard the health of the patrons of a large hotel from the dangers of bad drainage and contaminated water supply as it is to prevent boiler explosions on steamboats, or the ordinary accidents on railroads. The same precautions could be taken with the various religious camping-grounds, some of which are in a dangerously unsanitary condition. There is no doubt that hotel proprietors would gladly second any measure so directly calculated to benefit their business, while they would only be too glad to be relieved of the responsibility which any individual efforts in such a direction might involve.

CONCERNING WELL-WATER SUPPLY.

The Health Board of the State of New York has signified its intention to aid the local boards in the investigation of the causes of contamination of drinking-water as supplied by the ordinary wells. This is certainly a practical method of solving one of the most difficult problems of water supply throughout the country. The people in rural districts particularly are yet to be taught the most frequent causes of well-pollution. There is no doubt

that the board will make the best use of its facilities for the collection of statistics, and for the systematic arrangement of facts bearing upon this vital question. In sparsely settled regions where there is no danger of soil saturation, the spring or well is doubtless the safer as it is the most natural means of supply. But the contrary holds true, as we all know, where a large number of inhabitants are congregated, as in our rapidly growing villages, and where private wells abound in necessarily close proximity to privy vaults and sewers. There are many such in this State, and it would be exceedingly interesting to learn the results of some of the analyses of many of the old wells in thickly settled portions of the older towns. It is the exception rather than the rule for the towns to have any provisions whatever for sewerage except what may be obtained from the surface drainage of the gutters into the adjoining ponds or rivers. Under the circumstances the chances of soil contamination are proportionally great, as compared with cities having the regular system of underground flow. If the examination is carried on by the board with the same thoroughness as was that of the construction of school-houses throughout the State, a very interesting and instructive chapter will be added to the discussion of one of the most important questions of the time.

THE YELLOW FEVER EPIDEMIC.

An epidemic of yellow fever at present exists in Texas. During the summer a few cases were brought to or developed in some of our seaport towns. It was not until the last of July, however, that the disease fastened itself upon any single place. In the two weeks ending August 11th, there were reported ten deaths from yellow fever at Brownsville, Texas. From that time between one and three deaths have been reported daily there. The actual number of cases has not been accurately given, but it has ranged between twenty and forty per day. At Matamoras, and in several small neighboring towns, the disease has also prevailed more or less extensively. In fine, Texas is suffering from a well-established, though limited, epidemic.

Measures to prevent any further spread of the disease are being actively taken. The National Board of Health has been unable, through lack of money, to help the local authorities. Fortunately, however, the Marine Hospital Service has had put at its disposal $100,000, to be used in emergencies like the present. This will, no doubt, be judiciously expended by Surgeon-General Hamilton, whose experience and executive skill have before this been well attested. The money furnished by the Government is to be expended in caring for the sick in hospitals and in quarantining infected localities. With the aid of local authorities and volunteers, a cordon has been put about the infected districts. At date of writing this, quarantining is not complete, and there seems to be some opposition to it in a few of the smaller and less infected places. The policy adopted by Dr. Hamilton is reported to be that of not forcing a quarantine upon any town against its wishes. There is some danger in this, lest local stupidity, by refusing, for selfish reasons, a sanitary cordon, might paralyze the best efforts to limit the epidemic.

However, the disease does not yet appear to be in a very malignant form. It is not at present increasing rapidly, and it is unlikely that its ravages will become extensive. The fall months are at hand, and with them cooler weather will come. With any ordinary care, it is almost impossible that we should have any extensive epidemic of yellow fever.

Reviews and Notices of Books.

Materia Medica and Therapeutics — Inorganic Substances. By Charles D. F. Phillips, M.D. Edited and adapted to the U. S. Pharmacopœia, by Laurence Johnson, A.M., M.D. Two volumes. Wood's Library of Standard Medical Authors. New York: William Wood & Company. 1882.

The first part of Dr. Phillips' "Materia Medica and Therapeutics" was published in 1879, in the present standard series. Thus the concluding part has been but recently completed.

Dr. Phillips' method of treating his subject is to take the different minerals, acids, gases, etc., and give a description of their physical and chemical peculiarities, physiological action, therapeutical action, the different preparations, and the mode of administration. Each chapter is arranged for a nearly monographic completeness.

Dr. Phillips has been moderately successful in carrying out his plan. He has collected a great deal of information regarding each object, and he presents it well. His own observations and experiments are extensive and have enabled him to decide judiciously for the most part upon the observations of others. He states things clearly and without superfluous words. We do not know of any English work which embodies so many facts regarding the subject here treated.

It will strike the reader at once that Dr. Phillips has scoured English medical literature thoroughly for every item bearing upon his work. A good deal of matter is thus put in which is second-hand and of doubtful value. The author does not seem to know German literature except by translation. His quotations from it are not numerous, and inferences from translations and abstracts are rarely trustworthy. Dr. Phillips is evidently not well acquainted with American literature either, otherwise he would perhaps have taken Bartholow's therapeutic dicta with a little more salt, and would have strengthened the physiological part of his work by a close study of Wood. We might inform Dr. Phillips also that in this country the reference "Medical Record" indicates a weekly journal of medicine and surgery, published in New York, and that very few Americans ever heard of a London monthly which abstracts medical items for the Briton who can only read his mother tongue, and which stole its name from The Medical Record of this city some years ago.

DIET OF INFANTS AND YOUNG CHILDREN. By JOHN C. MORGAN, M.D. Philadelphia: James Hogan. 1882.

THIS is a small manual of fifty pages. It contains the usual statements regarding infant diet. The author would have cow's milk diluted rather more than is usual. He also discusses and recommends commercial infant foods without much discrimination.

HALF YEARLY COMPENDIUM OF MEDICAL SCIENCE. Edited by D. G. BRINTON, M.D. Part XXX., July, 1882. Philadelphia.

THIS is one of the best reviews of medical progress published.

L'ANNÉE MÉDICALE, 1881. Résumé des Progrès Réalisés dans les Sciences Médicales. DR. BOURNEVILLE. Paris: Plon & Cie. 1882.

THIS annual has already in its fourth year established itself as among the best. It is in small octavo form, 450 pages.

HINTS AND REMEDIES FOR THE TREATMENT OF COMMON ACCIDENTS AND DISEASES, AND RULES OF SIMPLE HYGIENE. Compiled by DAWSON W. TURNER, D.C.L. Eighth English edition. 8vo, pp. 99. New York: Macmillan & Co. 1882.

THIS ought to be a wonderful book if supervision could make it so. Twelve eminent medical men and one bishop have helped in its completion. The book is really one of the best we have seen. It contains nearly all that the laity needs to know, and is better, in our opinion, than a hundred First Aid to the Injured Societies.

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS. By SIR HENRY THOMPSON. Sixth London Edition. Illustrated with seventy three wood engravings. Philadelphia: P. Blakiston, Son & Co, 1882.

THIS popular work is printed in pamphlet form by the American publisher and sold at a remarkably low price. The profession is familiar with the general character of the work. The present edition contains some modifications of the older text, notably regarding the subject of lithotrity. Lithotrity at a single sitting is regarded as superseding to a large extent lithotomy. The book presents in a small compass an epitome of what is known regarding the diseases of the urinary organs.

RECHERCHES CLINIQUES ET ANATOMO-PATHOLOGIQUES SUR LES AFFECTIONS CUTANÉES D'ORIGINE NERVEUSE. Avec 4 planches et plusieurs figures. Par HENRI LELOIR. 8vo, pp. 220. Paris: Aux Bureaux du Progrès Médicale. 1882.

THIS monograph shows great industry and considerable original work upon the part of its author. The subject is treated of systematically and exhaustively, the author beginning with a study of the question of the relation between skin diseases and the nervous system. In his first chapter he reviews the clinical proofs of the nervous origin of certain skin affections. Next he gives the evidence from morbid anatomy that the nervous system is involved in some of the diseases in question. In the third chapter he gives reasons for believing that certain cases of vitiligo, ichthyosis, ecthyma, acute pemphigus, cutaneous gangrene, leprosy, "le mal perforant," and herpes zoster, are of nervous origin. Some cases of eczema are thought to be of nervous origin also.

In the fourth chapter the pathology and physiology of these dermatoses is discussed. In the last chapter the importance of the subject is insisted upon and therapeutic indications are given. The work is beautifully illustrated and the author has supplied a copious bibliography.

We admire the zeal and thoroughness of Dr. Leloir's work. It is a model scientific work and is full of instructive facts. We are quite prepared to agree with most of the author's conclusions and take issue only with his theory of the (peripheral) nervous origin of leprosy. This is hardly proven.

DIE NERVOSITÄT von DR. PAUL JULIUS MÖBIUS. Illustrirte Gesundheitsbücher Leipzig, verlag von J. J. WEBER, 1882. NERVOUSNESS, by DR. PAUL JULIUS MÖBIUS, of Leipzig. 8vo, pp. 191.

THIS little work is one of a series of "health-books," and is avowedly written for the laity. The author has, therefore, very judiciously devoted over half the book to the causes of nervousness, the remainder being divided between symptoms and treatment.

Nervousness is not defined except figuratively. It is, says Möbius, the plastic clay out of which the more pronounced neuroses are formed. The chapters on etiology are excellent, and cannot but strike the attention of the non-medical readers. The book, indeed, takes up a morbid condition, which should before have attracted the attention of sanitarians.

Dr. Möbius draws considerably from Bouchut's "Du Nervosisme" and Beard's "Neurasthenia." He is, however, essentially original and independent in his methods and opinions.

PRACTICAL MEDICAL ANATOMY. A Guide to the Physician in the Study of the Relations of the Viscera to each Other in Health and Disease, and in the Diagnosis of the Medical and Surgical Conditions of the Anatomical Structures of the Head and Trunk. By AMBROSE L. RANNEY, A.M., M.D. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1882.

DR. RANNEY'S object is to present anatomy in an interesting and practical way. He does this by taking up different regions of the body or organs, and describing them, giving at the same time all the points of medical or surgical interest connected therewith. The anatomical descriptions are neither minute nor complete, but so much is given as is thought necessary. There is no question that the author has managed to give a great deal of anatomy in an attractive manner. The book will supplement the regular anatomical studies of the student, and the practitioner can read it with much profit and less weariness than attaches to ordinary works.

In some parts of the work the author shows himself an industrious but superficial gleaner, rather than a sound student. This is notably the case in his description of the skull, which is very imperfect in its anthropological statements.

The illustrations are very poor, especially some of those which aim to illustrate the physiognomy of disease, and which, if inserted at all, should have an artistic value. In the cut illustrating the arteries of the brain, the "inferior temporal lobule," whatever that may be, is placed just below the interparietal fissure. A diagram, later on, showing the arterial circulation at the base of the brain, is attributed to Charcot, when it was in fact drawn by the translator of his work, Dr. E. P. Fowler.

These are, of course, minor errors. It is impossible to deny to Dr. Ranney the credit of having written the most attractive anatomical work extant of a, so to speak, popular character.

Reports of Societies.

BRITISH MEDICAL ASSOCIATION.

Fiftieth Annual Meeting, held in Worcester, England, August 8, 9, 10, 11 *and* 12, 1882.

(Special report for THE MEDICAL RECORD.)

GENERAL SESSION—FIRST DAY, AUGUST 8TH.

THE meeting was called to order at 8 A. M., in the Guildhall, Worcester, by BENJ. BARROW, ESQ., retiring president, who introduced the president-elect, W. STRANGE, M.D., of Worcester.

A vote of thanks was tendered to MR. BARROW for the manner in which he had filled the office of president the preceding year, after which DR. STRANGE delivered his address.

THE ADDRESS OF THE PRESIDENT.

After a few preliminary remarks, he asked the attention of the members to some thoughts "upon the progress of medical science, so-called, and its relation to the advancement of science in general." He divided his subject into two parts, first, that referring to the "revival of medicine," and secondly, that relating to the "survival of medicine." The era of the revival of medicine dated back to the year 1831, when the British Association for the Advancement of Science was organized, and when, a year later, the British Medical Association was founded, and when the profession were prepared to receive new truths, to accept new doctrines and to overthrow old and long cherished dogmas, led by such men as Phillip, Lawrence, Abernethy, Cooper, Latham, Marshall Hall, Brodie, Watson, Graves, Andral, Stokes, and Colles. No deductions were drawn by these men from a few meagre facts, warped and manipulated to fit them to a preconceived theory; but the true Baconian system was honestly adopted and no conclusions come to but such as were justified by the data at command." The time was ripe for a new departure in medical as in other departments of research, the way was open for the freest possible interchange of thought and opinion upon matters requiring discussion, and the British Medical Association stepped in to do its grand work of associating the efforts of the leading medical minds of the day.

Another event, almost coeval with the founding of the Association, came to the rescue and helped to make the decade 1830–40 for ever memorable in the annals of British medical literature. This was the establishment of the *Lancet* as the leading medical journal. Through its agency monopolies were destroyed; hole and corner meetings and doings of the corporations for the benefit of the few to the detriment and exclusion of the many were exposed; pompous ignorance and overbearing imbecility were held up to scorn; the oppressed and obscure, but honest and industrious seeker after truth was brought to the front. After a time, feeling its growing strength, this brave journal attacked the legislature itself. And it was time. Its apathy toward all that concerned the interests of our profession, displayed in its intolerance of the most abominable abuses and monopolies in high places; its utter neglect of the public health; the farce of the coroners' courts; its winking at the atrocious adulterations of the people's food; its inhuman neglect of the sick poor; and its disregard of all decency in respect of the burial of the dead—these abuses were one by one attacked, and their authors and abettors lashed with a pitiless and unsparing hand, until redress and reform were grudgingly conceded. The man who—whatever his faults, and they were many—spent the best part of his life in compelling the legislature to listen to his exposure and his complaints of these gigantic evils, and to redress them, was at length listened to, admitted into the legislature itself, became a politician, and spoiled! "None the less does the memory of Thomas Wakley deserve this testimony from us, who now possess an organ of our own quite capable of maintaining those rights and privileges for which, in the early days our association, we had no sufficient weapon wherewith to do battle."

Then came the *Review*, with its candid and intelligent analysis of medical thought, its fair play to all, and its noble encouragement of everything that was good and true in medicine.

But everything was not due to these influences and to the great names of 1830–40. Those musty old tomes, reposing so peacefully on the back shelves of our libraries, what testimony did they not bear to the self-denying spirit displayed by their authors in transcribing and compiling whole systems of medicine, gathered with a labor and amid difficulties unknown to us, from every accessible source, for the benefit of those who should come after them. Contrast *their* labors with those of our modern medical *dilettanti*, whose hasty and sometimes crude lucubrations are carried weekly by a free press into thousands of medical homes, and say if, in this imperfect sketch of the history of a half century's literature, these older fathers of the *ars medicinæ* should have been altogether passed over and forgotten?

Looking upon the evolution of the medical mind as a continuous process, coming from whence we started, and going we know not whither, he glanced in the second part of his discourse to present prospects of medicine. The surest signs of progress and the best promises for the future were centred in the love of liberty of thought, "freedom to speak, freedom to write, freedom to teach. . . .

"There is no theory which we may not promulgate; no practice, short of manslaughter, which we may not pursue. An unfettered press and open criticism are the courts before which all claims to new discovery, to improved practice, to advance in knowledge must be brought. All must stand or fall by their own merits. Still, great names have their weight. The words of a Jenner or a Paget, compared with those of little-known authors, are as the discharge of an eighty-ton gun compared with that of a pocket-pistol. Now the great value of this liberty, and the free organs which it has set up, must be evident to all. Its advantages in regard of freedom of debate, of teaching and of writing, are too great ever to be allowed to be withdrawn from us under any circumstances whatever. For by it original genius obtains an immediate and impartial hearing; by it the patient and self-denying laborers of industry and talent, who may have passed years in silent research, at length obtain their reward. Let us, then, never relinquish into the hands of the State the decision as to what shall be the kind and amount of our knowledge on entering our profession, or in what way and under what restrictions we shall conduct our experiments and inquiries into the laws of nature for the good of mankind; or in what manner and for what reward we shall carry our knowledge to the bedsides of our patients, be they

the rich in their mansions or the poor in our hospitals; or in what way we shall regulate our mutual intercourse. Over the church and over the law, for obvious reasons, it may be desirable that the State should hold a check; but over the investigations of science, and over the application to practice of that science, we will have no master other than the moral conscience of our profession itself."

The speaker next alluded to the growing philanthropy of the profession as the second factor in the line of its progression, and lastly to its love for truth in prosecuting its researches, giving numerous examples of the latter.

REPORT OF THE COUNCIL.

Mr. Fowke presented the regular report of the Council, which referred to matters of interest to the Association merely.

SHALL HOMŒOPATHS BE EXPELLED FROM THE ASSOCIATION?

Mr. Nelson Hardy, of London, in moving the adoption of the report, proposed the following as an amendment to the same: "That the report of the Council, together with the financial statement for the year ending December 31, 1881, be approved, adopted, and entered on the minutes; and that it be an instruction to the Committee of Council that the avowal of the profession of homœopathy, or any other designation implying a special mode of treatment, shall, *ipso facto*, disqualify from membership of the British Medical Association."

After a lengthy discussion the amendment was put and was rejected by a large majority.

CONCERNING THE ELECTION OF THE EDITOR OF THE BRITISH MEDICAL JOURNAL.

Dr. Milner Fothergill, who had given notice of a motion concerning the election of editor of the *British Medical Journal*, was absent when that order of business was reached. Dr. Fothergill had asked by letter that the subject be postponed to another time than that fixed by the Council. It was accordingly allowed to go by default.

Dr. Ward Cousins (Southsea) proposed alterations in the by-laws affecting the *Journal* and Finance Committee. These were, after considerable debate, referred to the Council, after which the meeting adjourned.

Second Day—Wednesday, August 9th.

The meeting was called to order by the President, Dr. Strange.

Dr. Fothergill desired to bring up his resolutions regarding the election of editor of the *Journal*, but he was ruled out of order.

ADDRESS IN MEDICINE.

Dr. W. F. Wade, of Birmingham, then delivered the Address in Medicine.

The speaker began by calling attention to the therapeutical methods in use half a century ago. As we can be helped to write and speak correctly by studying a dead language, so, he thought, we can learn much by studying therapeutical methods now entirely abandoned. The great characteristic of the therapeutics half a century previous was blood-letting. It was difficult to find a disease in which high authority did not advocate this practice. A revolution in opinion, however, was soon to take place. It was a time, when there was a general overturning of old systems, and the medical profession was affected by the general tide of thought and feeling. The importance of the *vis medicatrix naturæ* was being recognized.

The speaker referred to the tenacity with which the practice of blood-letting was adhered to. There existed a blind credulity in the dictates of an imperfect science. This imperfectness of medical science was at last felt. It should always be borne in mind now. The physician deals with a science of probabilities. But this science is not a contemptible one. The existence of the Deity is attested by it alone, according to some philosophers.

With these facts in mind, caution in the use of drugs is needed. We are often tempted to give powerful drugs when we really cannot say why they are indicated. The case is distressing and needs, as we think, some active measure. It should be borne in mind that meddlesome medicine is as bad as meddlesome midwifery or meddlesome surgery.

Dr. Wade then gave a brief history of Marshall Hall's fight against blood-letting and his final triumph. The speaker also showed how Hall's vivisection experiments were so abundantly justified by their results. He also referred to Harvey's experiments, and defended Harvey's claim as discoverer of the circulation.

The speaker, although admitting the imperfection of medical science, dilated upon the fact that it was most progressive, and this not only in the matter of new drugs but in our knowledge of how better to use old ones.

The desire for advance, for something new, tempts us to accept errors, and especially to make hasty generalizations. The use of large doses of digitalis, and Todd's theory of the universal applicability of alcohol were instanced as examples of such errors.

The search for specifics had tempted many. One reason why this search was likely to mislead lay in the fact that it almost inevitably involves a conception of disease as a unity, instead of a complexity of processes.

The speaker directed attention to another danger into which the modern therapeutist may be led. It is a very prevalent opinion that "debility" is a predisposing cause of disease, and the notion of debility has now become so large that the condition itself is often confounded with disease. The therapeutical method of building up the system rather than attacking the disease is therefore very prevalent. Yet in some cases this is undoubtedly wrong. A disease may seize upon a debilitated body and run a lighter course than if the person were robust. We must attack the disease, therefore, if possible, as well as strengthen the nutrition.

The speaker, in concluding, said that he had presented various past therapeutical errors in order that we might learn from them. Dispassionate survey of present medical practice forced him to the conclusion that on a very large scale, and in both chronic disorder and organic disease, the physiological basis of treatment is too often unduly subordinated to the restorative basis of treatment. And the greater our advances in anatomy, physiology, and pathology, the more need that our powers of observation be sharpened, refined, and sensitized; for sources of error multiply with increase of knowledge.

At the conclusion of the address a vote of thanks was tendered to Dr. Wade.

COMMITTEE OF THE COUNCIL.

The following members were then reported as elected by the Council to serve on the Committee of the Council: J. T. Arlidge, M.D.; J. H. Bartlett, M.B.; J. P. H. Boileau, M.D.; L. Borchardt, M.D.; B. Foster, M.B.; E. Long Fox, M.D.; A. J. Harrison, M.B.; C. Holman, M.D.; Leslie H. Jones, M.D.; H. Lanchester, M.D.; C. Macnamara, Esq.; F. E. Manby, Esq.; Frederick Mason, Esq.; R. H. B. Nicholson, Esq.; Rushton Parker, Esq.; S. W. Sibley, Esq.; E. H. Sieveking, M.D.; A. P. Stewart, M.D.; T. Sympson, Esq., and John Wood, Esq.

THE NEXT MEETING IN LIVERPOOL.

An invitation was received from the profession in Liverpool to hold the next annual meeting of the Association in that place. This was unanimously accepted, and Dr. A. T. H. Waters, of Liverpool, was chosen as the next President.

An invitation to hold the meeting for 1884 in Belfast was also received, but its consideration was postponed for a year.

The Association then adjourned.

PRESENTATION OF THE BUST OF SIR CHARLES HASTINGS, FOUNDER OF THE ASSOCIATION.

At 1.30 P.M. the members were entertained at luncheon by the Worcester and Hereford Branch, when a bust of Sir Charles Hastings, the founder of the Association, was presented to the city of Worcester. Speeches were made by Dr. Strange, Mr. George Hastings, M.P., Mr. Husband, and the Mayor of Worcester. About five hundred members were present.

THIRD DAY—THURSDAY, AUGUST 10TH.

The meeting was called to order at 10 A.M. by the President, DR. STRANGE.

THE ADDRESS IN SURGERY

was delivered by WILLIAM STOKES, F.R.C.S.E., of Dublin. After a few introductory remarks, in which the speaker referred to the general work of the profession and the efforts to raise the standard of education, he passed to the enumeration of some of the chief advances which had been made in surgery during the last half century and then to the contemplation of those in which he had been more especially interested. These were the abandonment of indiscriminate blood-letting, the reckless use of mercury, and the use of the seton and moxa; the introduction of the pressure treatment of aneurism, of drainage in the treatment of wounds and abscesses, of metallic sutures; the perfecting the operations for vesico-vaginal fistula by Sims and others; lithotrity; the treatment of stricture; joint resections; the placing of ovariotomy upon a firm basis by McDowell, Clay, and Wells; gastrotomy; excision of the pylorus, spleen, kidney; supra-pubic removal of the uterus; laparotomy; cholecystotomy; improvements in the methods of amputation; bloodless surgery; skin-grafting, sponge-grafting, torsion; cure of aneurism by arterial ligation; treatment of fracture by improved splints; manipulation in the treatment of luxation, and improvement in the treatment of spinal disease by the use of the plaster jacket by Sayre. But great as had been the advance in all these directions, they paled before three which had not been mentioned, namely, (1) the discovery of the means of banishing pain; (2) the means of bringing about the restoration of an injured joint, so as to obviate the necessity of excision; and (3) the enunciation of the principle and establishing of the practice by Pasteur and Lister of antisepticism: *anæsthetics*, *antiseptics*, *osteogenesis*. These were the topics to which he directed special attention.

ANÆSTHETICS.

Whatever anæsthetic was employed, even with the most careful use and precaution, the gauntlet of peril was to be run, and he believed it would always be so. Of ether and chloroform much had been done to diminish the danger attending their use, such as the avoidance of ether in infancy and extreme age, and in cases where there was reason to believe that chronic renal disease existed; the avoidance of chloroform in all cases of cardiac disease, and the constant bearing in mind its liability to produce cardiac paralysis.

Again, the administration of anæsthetics should be entrusted only to persons of experience. In the majority of cases he unhesitatingly would use ether, and some one of the apparatuses in which *air was rebreathed*, should *always* be employed. To Morton, of the Massachusetts General Hospital, was given the credit of first demonstrating, in 1846, the anæsthetic properties of ether; and to Simpson, of Edinburgh, the anæsthetic properties of chloroform for surgical operations, and all must agree with Dr. Gross, of Philadelphia, in the statement that, if America had never discovered anything else, the world owed her a debt of everlasting gratitude.

ANTISEPTICISM.

The treatment of wounds was the corner-stone of surgery, and the antiseptic practice should rank as the greatest advance which had been made during the last half century.

Special attention was then directed to Mr. Savory's address before the association at Cork two years ago. In that address, when stripped of its eloquence, two facts came to view: (1) the admission of the germ theory of putrefaction; and (2) that the dressings which Mr. Savory advocated as superior to those recommended by Mr. Lister, were in themselves antiseptic, consisting of carbolized oil and sutures, drainage, washing the wound with a solution of permanganate of potash or other antiseptic.

With regard to Mr. Lister's remarks, he did not "enter antiseptic surgery and then sing a dirge over it."

From a purely practical point of view it appeared to be of but little consequence whether we adopted the view that the micro-organisms were mischief-makers or mischief-carriers; that is, whether they operated primarily or secondarily. From this point Dr. Stokes discussed at some length the theories and the tests concerning the value of antiseptics, and said that he did not consider ovariotomy as the touchstone with regard to their value. Bloody serum he believed to be the most unfavorable ground for the development of the germs. Resection of the knee-joint was the best test, and several cases were cited.

With regard to this operation, and all others in which antiseptics were employed, the important question to be asked was, Could these results have been obtained previous to Lister's teachings of antiseptic surgery? To this question there was but one answer, and that was, Impossible.

Dr. Stokes then gave some of his personal experiences in the use of the antiseptic treatment under unfavorable hygienic surroundings, in connection

with public institutions in Dublin, especially the Richmond Hospital. In six years hospital gangrene had disappeared, and not a single case of erysipelas, septicæmia, or pyæmia had occurred when the Listerism had been *accurately carried out*. Of six hundred cases in this hospital only a mortality of three had occurred, and in not a single case had death taken place where Listerism was accurately employed, and the cases were those of compound fracture, abscesses, ununited fractures, foreign bodies in joints, etc., etc.

It had been a subject of profound regret to him that so many surgeons of deserved celebrity had been found disposed to either discard Listerism altogether, or to give it only a lukewarm acceptance.

Dr. Stokes then directed attention to

OSTEOGENESIS,

upon which he spoke at some length, reviewing various operations, such as Carden's, Gritti's, and the modifications and improvements which had been made in sub-periosteal surgery. The principle of the long anterior flap in amputation at the knee received a special compliment.

The address was closed with an eloquent reference to the subject of *vivisection*.

On motion of MR. PRIDGIN TEALE, seconded by SIR WM. MACCORMAC, the Association gave a vote of thanks to Mr. Stokes for his able and eloquent address.

THE PRESIDENT then presented the

STEWART PRIZE OF FIFTY GUINEAS,

which had been awarded to Surgeon-Major HENRY VANDYKE CARTER, M.D., I.M.D., for a dissertation on "Spirillum, or Relapsing Fever."

The prize was received by the Surgeon-General in behalf of Mr. Carter.

The Association then adjourned.

SECTION IN SURGERY.

AUGUSTIN PRICHARD, F.R.C.S., President.

EARLY OPERATIVE TREATMENT OF JOINT DISEASE AS A PREVENTIVE OF EXCISION.

Discussion on the above subject was opened by MR. J. GREIG SMITH, who said that the principle which he wished to advocate was what might be called, "tinkering of the joint *vs.* excision." Scrape away diseased tissues, move the joint freely, drain antiseptically, but do not drain too long. Deal as freely and as vigorously as possible with the synovial membrane and remove diseased bone bodily.

The discussion was continued by MR. PRIDGIN TEALE, of Leeds, who thought that treatment of joint disease had been based far too much upon what had been seen in hospitals, where, as a rule, the cases were admitted only when the disease had become much advanced. The antecedent conditions had been too much neglected, and the great question was, "How can we best deal with the elementary processes?" Except in the matter of rest and counter-irritation, practically but little had been done. For several years he had attempted to deal surgically with the earlier processes, and the point which he had in view was this. There were certain early conditions, exactly what they were he was not yet prepared to say, where there was tension within the joint, attended with pain, and if the tension could be removed the pain would be relieved and, in many instances at least, the disease would be arrested. His plan of treatment had been to make subcutaneous incisions one-fourth of an inch in length into the capsule of the joint and allow the fluid to escape into the surrounding tissues to be absorbed. He then cited several cases of incipient hip-joint disease in which he had adopted this method with success.

MR. BARWELL, of London, said that he had practised, and already published in his work on joint diseases, the method recommended by Mr. Teale. He had also used the aspirator instead of the knife, but had found that it sometimes disappoints, especially if the fluid within the joint was pus. When pus was found, he at once introduced a tenotomy knife, divided the capsule freely and left the opening in the skin as a mere puncture.

MR. LUND had known of cases of hip-joint disease where great relief followed puncture. He had also known of two cases in which abscess followed the operation. He wished, however, to confirm Mr. Teale's remarks, and added the abscess cases simply to show that unpleasant results might attend the method.

A MEMBER directed attention to the use of Martin's elastic bandage, presented by Dr. Marcy, of Boston, at the International Medical Congress, in the early treatment of joint affections. He regarded it as worthy of a trial.

MR. H. MORRIS, of London, spoke of the great advantage of aspiration in acute cases with pain and tension. In those cases where pus was found, free incision should be made, followed by position and rest. But there was a class of cases in which the treatment recommended by Mr. Smith was of service. He then referred to two cases, one of the hip and the other of the shoulder, in which a small sequestrum was found that doubtless kept up the irritation and suppuration, and which, if it had been removed, the patient's life, perhaps, would have been saved.

MR. WILLIAM THOMSON then read a paper on

RUPTURE OF THE KNEE-JOINT AND COMPOUND FRACTURE OF THE PATELLA.

The paper consisted of the report of a case, with remarks. It was one in which he practised suturing of the bone with silver-wire, afterward excised it, and the patient recovered. The operation of cutting down and wiring the fragments together was first performed by Dr. Crocker, of San Francisco. Mr. Thomson, however, thought it should not be done in ordinary recent cases, and questioned as to whether it was a justifiable operation. In old cases it might be justifiable. He had never seen a patient who had ligamentous union, and was unable to use the limb, and he did not regard ligamentous union as one possessing special disadvantages. Indeed, he had never seen a case of osseous union in the living human subject.

MR. JESSOP, of Leeds, referred to two cases of fracture of the patella. The first was compound, with extensive laceration of the soft parts. The wound was thoroughly cleansed, treated antiseptically, the fragments wired together; not a single unfavorable symptom developed, and the result was bony union with good motion in the joint.

The second case was one of simple fracture of the patella, which he made compound, cleansed away the blood, treated it in the same manner as he did the first case and with the same happy result.

MR. WHEELHOUSE, of Leeds, related a case of compound fracture of the knee-joint, treated in the same

manner described by Mr. Jessop, and at the end of two months the patient left the hospital with firm bony union and a flexible joint.

He had also had a case of old fracture of the patella in which there was long ligamentous union, and the patient could scarcely use the limb. He opened the joint as freely as was the one with compound fracture from injury opened, removed all the fibrous union, revivified the edges, applied wire sutures to the fragments, and the man recovered with ability to walk and work as well he ever had done.

Dr. Moore, of Belfast, had removed the blood from the joint by means of the aspirator, in cases of fracture of the patella, and with good results.

Mr. Teale had had one case of bad union after fracture of the patella, the fragments being separated to the distance of an inch and a half. He performed the operation spoken of by Mr. Wheelhouse, and found great difficulty in bringing the fragments together, but they were finally easily approximated by means of Malgaigne's hooks, secured with wire sutures, and a good result was obtained.

So far as simple fracture was concerned, he had reached the point of *not* applying any apparatus whatever, but simply treating the limb by position.

LITHOLAPAXY.

Mr. Reginald Harrison, of Liverpool, reported a case of stone in the bladder removed by Bigelow's method. The calculus weighed two and one-half ounces, was composed of phosphates and urates. The operation lasted two hours and ten minutes. Thirty washings were made, and the entire stone was removed except a small fragment which passed by the urethra. The patient recovered without the development of an unpleasant symptom. A smooth-bladed lithotrite was used, and it was the instrument he recommended. He had not experienced any difficulty in its use on account of impaction. He employed Bigelow's original washing apparatus.

Mr. Gold presented a photograph of a calculus removed by Bigelow, which weighed three ounces. [See proceedings of the New York Academy of Medicine, Medical Record, vol. xxi., p. 578.]

Mr. J. Ward Cousins exhibited

A LONG-BEAKED STAFF FOR LITHOTOMY,

and claimed for it the following advantages: 1st, the angle of the instrument could always be reached, and thus the operator could always know where his finger and knife were; 2d, it obviated the danger of pushing the bladder off from the beak of the instrument; and 3d, it enabled the operator to raise the base of the bladder up beyond the pubes and thus obviate the danger of injuring the rectum.

He had never had any difficulty in introducing it, nor had he ever wounded the posterior wall of the bladder with it, and did not believe that, if properly used, any inconvenience would be experienced in those directions.

Mr. Browne referred to a case where, by ordinary lateral lithotomy, a calculus weighing seven and one-half ounces was removed and the patient recovered without difficulty.

He objected to the long-beaked staff, because of its apparent difficulty of introduction.

The discussion was continued by several members, but no essentially new points were developed.

A discussion on

BONE-SETTING.

was opened by Mr. Howard Marsh, of London, and continued by Mr. Cross. It consisted chiefly of a narration of cases in which bone-setters had either succeeded or made disastrous failures, and an effort was made to explain why success attended their manipulations in certain apparently remarkable instances. The first paper was really one on "manipulation as a surgical treatment," under the heading of "Bone-Setting."

Mr. Wm. Adams, of London, then read a paper on

THE SELECTION OF CASES FOR FORCIBLE MOVEMENT IN THE TREATMENT OF STIFF JOINTS, AND THE METHOD OF PROCEDURE.

The selection of cases could be based only upon accurate pathological considerations. But the basis, to a great extent, was still undetermined. By the term stiff joint, he meant to include cases of bony or fibrous anchylosis, properly so called. The essential cases are those in which joints are made stiff by inflammatory thickenings external to the joint, including capsule and ligaments, and inflammatory adhesions between the articular cartilages. The existence of articular cartilages was essential to the restoration of healthy motion.

Cases of stiff joint were classified as follows:

First.—Those of traumatic origin in healthy constitutions, generally in adults.

Second.—Those due to rheumatic inflammation of the joint.

Third.—Those due to strumous disease of the joint.

Fourth.—Those following acute suppurative inflammation, of pyæmic origin in the neighborhood of the joint and extending into it.

Fifth.—Those due to muscular contraction.

The *first* class of cases were generally favorable for treatment by forcible movement, and they could be divided into *four* groups:

a. Cases occurring after dislocations which had been reduced.

b. Cases in which motion was limited in non-reduced dislocations of long standing. It was sometimes advisable in these cases to resort to forcible movement.

c. Cases occurring after fracture into, or in the neighborhood of joints.

d. Cases of stiff-joint after bruises, followed by inflammation of the joint.

The *second* class of cases were usually favorable for treatment. In rheumatic inflammation, whether affecting the joints or not, or the pericardium, it might be stated, as a general rule, that there was no disposition either to suppuration or ulceration, the usual result being effusion of lymph and organizations of adhesions. The cases could be divided into *three* groups:

a. Cases of stiff joint occurring after acute rheumatic inflammation.

b. Cases occurring after gonorrhœal rheumatism, generally favorable for treatment.

c. Cases occurring after chronic rheumatic inflammation, generally favorable for treatment when attempts to regain motion have not been too long delayed.

The *third* class of cases were essentially unfavorable for treatment, in consequence of the destructive character of the disease. Even when external abscess did not occur, disorganization of the joint was usually complete, and fibrous or bony anchylosis was the best result to be expected.

The *fourth* class of cases were essentially unfavorable for treatment, in consequence of destruction of

the articular cartilages and disorganization of the joint.

The *fifth* class of cases occurred, for the most part, in connection with disease of the hip- and knee-joints, and forcible movement was totally inapplicable. Gradual extension only should be used.

With regard to *the mode of procedure:* When it was necessary to use a great amount of force, permanent motion probably would not be obtained. Besides, there were several accidents, such as fracture, rupture of blood-vessels, etc., which were liable to occur. Instead of employing the violent method in such cases, and attempting to obtain full range of motion, he adopted the gradual method, using at first only sufficient force to obtain the least possible movement, and gradually increasing the range of motion until the full extent was obtained.

After the operation he applied some such dressing as spongio-piline, and secured absolute rest. A weight and extension might be used in some cases. Absolute rest and local vapor-bath. By the gradual method pain and inflammation were avoided.

In the simpler forms a single operation would frequently suffice; but it might be necessary to repeat the operation many times. He referred to a case in which eighteen operations were performed, with the result of obtaining full and voluntary motion.

SECTION IN MEDICINE.

Dr. Clifford Allbutt, M.D., F.R.S., President, delivered his opening address, the chief merit of which was its excellence as a literary production. It was well adapted to the jubilee meeting, and was retrospective in character.

The first paper was read by Dr. Fletcher Little, London, and entitled,

DEMONSTRATION OF MEDICAL RUBBING.

It was a demonstration upon a patient of the various methods of rubbing, with a detailed statement of the points to be observed in its application. It was a combination of ordinary skin friction, French massage, and medical calisthenics of Zander, London. The principle was to relax every part to be rubbed in the most careful manner, and Dr. Weir Mitchell's book will give an excellent idea as to how it is to be done.

Dr. W. S. Playfair then opened a discussion on

THE SYSTEMATIC TREATMENT OF AGGRAVATED HYSTERIA AND ALLIED FORMS OF NEURASTHENIC DISEASE.

It was a *résumé* of Dr. Weir Mitchell's method of treatment which he had had carried out successfully in the treatment of a class of cases which he had heretofore looked upon as the opprobrium of medicine.

Dr. Balfour, of Edinburgh, opened a discussion on

CHLOROTIC MURMURS,

in which he laid special stress upon the importance of promptly removing them by systematic constitutional treatment, lest they become evidence of permanent cardiac damage.

Dr. Austin Flint, of New York, read a paper on

THE SELF-LIMITED DURATION OF PULMONARY DISEASE,

which was followed by a paper on

THE CONTAGION OF PHTHISIS,

by Dr. C. T. Williams, of London.

A general discussion of the subject of phthisis then followed, and was participated in by the President, Drs. Bennett, Drysdale, and others.

Dr. Henry Bennett, of London, thought it possible that the impure air surrounding a phthisical patient, coming from the expectoration, sweats, etc., might, if confined, give rise to something like contagion.

With regard to the spontaneous cure of phthisis, he had seen many unmistakable cases, and that phthisis had been recovered from had been proved by the existence of evidence of previous disease at the apices of the lungs found at autopsies.

Dr. Drysdale had long hoped that it was true we were going back, as Dr. Flint had indicated, to speaking of phthisis as pulmonary consumption, and identical, clinically, with pulmonary tuberculosis. Concerning the natural history of phthisis, he thought it could hardly be considered a self-limited disease in the same sense as small-pox, for example, was known to be; but that the affection underwent spontaneous cure was undoubtedly true.

With regard to the contagion of phthisis and its hereditary transmission, he believed, as Dr. Williams had expressed it, that it was incompatible with the theory of germs. He was unable to understand how the germ theory was to help us in the explanation of the transmission of the affection.

The discussion was continued, but nothing essentially different from that already given by Prof. Flint was developed, and with his views the readers of The Record have, from time to time, been made familiar.

Dr. A. J. Harrison, of Clifton, then read a paper on

PRIMARY ENDOCARDITIS,

in which he maintained that it was not only possible, but that it had occurred, and would again occur. The histories of four cases were given.

The President remarked that cardiac disease should not be taken as the test of the severity of rheumatic fever. Endocarditis was not infrequently the first event in rheumatic fever.

It not uncommonly was the only event by which the rheumatic fever manifested itself. He then referred to cases, notably one in which there was a rheumatic and phthisical family history and in which endocarditis occurred without other local manifestation.

Dr. Balfour said that every case of systolic murmur should not be considered as a case of endocarditis, because a certain amount of rheumatism might occur without endocarditis at all, and again, he had not seen a case of rheumatic fever in which there was not a systolic murmur. In fever of all kinds, especially in debilitated patients, a systolic murmur could almost invariably be detected.

Besides, he thought that every case of friction should not be regarded as a case of pericarditis.

Dr. Ashley referred to the fact that he had frequently observed endocardial and pericardial murmurs in connection with slight attacks of tonsillitis, a fact long ago observed, and, as was well known, tonsillitis had a casual connection with rheumatic fever, the same as influenza, already mentioned by the President. He therefore made it a rule to examine carefully in all cases of tonsillitis, especially in children, for endocardial and pericardial murmurs.

Dr. McVail, of Glasgow, then read a paper on

THE INTERRUPTED OR WAVY BREATH-SOUNDS OF PHTHISIS,

in which he gave what he regarded as a more correct explanation of their production than those commonly accepted, namely, roughened pleural surface

or some obstacle to the free entrance of the current of air into the bronchial tubes.

The explanation offered was the following: Ordinarily the heart-sounds are not heard over the right apex in inspiration, that is, with normal lung and heart, but can be heard in expiration. But when the lung becomes consolidated, however slight, it is a better conductor of sound, and the heart-sounds are mingled with the inspiratory sound and give rise to the irregularity, and the interruption is single or multiple according to the rapidity of the heart's action in proportion to the length of the inspiration.

Dr. Williams said that he accepted Dr. McVail's explanation, and that in a book written by his father and himself the same explanation had been given, with the statement that it was original with Theophilus Thomson so far as they had been able to ascertain.

THE TREATMENT OF CARDIAC, HEPATIC, AND RENAL DROPSY.

The discussion was opened by Mr. Leech, who wished to make prominent the fact that disappointment in the action of diuretics arose very frequently from expecting them to do what they were unable to do.

With reference to diaphoretics, he believed that we misjudged of the action of remedies. Because diaphoresis followed the use of a remedy it did not necessarily follow that it was the effect produced by the remedy.

With reference to the use of purgatives, he had not seen the benefit which had frequently been claimed for them. Where he had measured the urine he had not seen benefit follow the use of hydragogues. His general plan was to put the patient in bed, secure rest for some time, and then administer diuretics. When diuretics failed purgatives rarely succeeded. He had not seen benefit follow the use of the hot-air bath. In acute renal dropsy spontaneous diuresis occurred in almost every case. He had entirely failed to see any benefit from the use of pilocarpin.

Tapping was a mechanical measure to be resorted to. Exhaustion after tapping was most marked in ascites from cirrhosis; but it must be borne in mind that there was a marked wasting as one of the phenomena of that affection. He had observed only slight loss of strength after tapping for cardiac dropsy. He had observed peritonitis after tapping in only one case.

Southey's capillary tubes for draining the legs in general anasarca were of great value, although he had seen one case of phlegmonous erysipelas follow their use.

He had found that diuretics would act after rest and good diet, even though they had previously failed.

The President had found diaphoretics to be exceedingly uncertain in the treatment of any form of dropsy. He regarded hydragogues as very useful. The hot-air bath, in his experience, had been unsuccessful. He hesitated to tap the patient's legs, because of the liability to the occurrence of erysipelas; but the operation was almost brilliantly successful, if it could be performed without that liability, in cases of cardiac and renal dropsy.

He had used Southey's tubes with satisfactory results. With regard to tapping, he hesitated to adopt it early or to repeat it, because of the liability to produce exhaustion.

Dr. Thomas had found diaphoretics inactive, but sometimes they were successfully used after purgatives had been given.

He had not found any real benefit following attempts to act upon the skin. He had not resorted to early tapping in ascites.

Dr. Carter had used the hot-air bath and hot drinks with marked benefit, especially in dropsy following scarlatina, and had seen diuresis very frequently follow diaphoresis.

For cardiac and other dropsies other means must be undertaken, and digitalis had, in his hands, proved to be an exceedingly useful remedy.

He had resorted to early tapping, but preferred to use a very small trocar which would allow of only slow removal of the fluid, believing that thereby the liability to exhaustion was considerably reduced.

He referred to three cases of ascites in which different results followed tapping. The *first* was ascites with cirrhosis of the liver, and tapping was followed by gradual exhaustion. The *second* was ascites with Bright's disease, and tappings doubled the quantity of urine, and were always followed by relief. The *third* was ascites with cardiac disease, and each tapping was followed by diminution in the quantity of urine by one-half, although relief was afforded. This patient was tapped seventeen times. The patient with cirrhosis died, and the other two left the hospital in a comparatively comfortable condition.

He had used Southey's tubes for the legs with good results. He believed that the constant use of hydragogues should not be adopted; at intervals some simple cathartic should be used. The combination of rhubarb, jalap, etc., with elaterium, he regarded as very advantageous.

Dr. Roden recommended iodide of potash combined with full doses of nitric acid. Some preparation of iron with saline cathartics possessed special advantages.

Dr. Phillips had used Southey's tubes successfully, but regarded hypodermic injections of pilocarpin as one of the most valuable agents that could be used.

SECTION IN OBSTETRIC MEDICINE.

Dr. William Leishman, President.

Dr. Arthur W. Edis, Vice-President, in the Chair.

A discussion on

SUBINVOLUTION OF THE UTERUS, ITS CAUSES, ITS RELATION TO UTERINE DISEASE, AND ITS PREVENTIVE TREATMENT,

was opened by Dr. John Williams, of London, who first defined involution as a process of fatty degeneration which began in the uterus about the fourth day after labor—not later than the eighth—and was completed in about four weeks; a process by which the organ was restored to its natural condition. Clinically, involution consisted in the reduction of the volume of the puerperal uterus to the size of the unimpregnated organ.

Reference was then made to the various ways of measuring the organ after parturition. Concerning Sinclair's method by catheterization, he thought it liable to serious errors during the first ten days following delivery.

After the uterus had sunk into the pelvis, bimanual manipulation combined with catheterization was the only method which gave reliable results.

The average period at which he had found the fundus within the pelvis was the twelfth day, and he assumed, for the purposes of his paper, that the uterus has undergone normal involution on the twelfth day, although the assumption would lead to some errors, because the settling of the organ into the pelvis was not positive evidence of the non-existence of subinvolution.

THE CAUSES OF SUBINVOLUTION

had been said to be general debility, advanced age (bearing children late in menstrual life), multipara, premature delivery, protracted labor, post-partum hemorrhage, retention of portions of the placenta and membranes, laceration of the perineum, bruising and laceration of the cervix uteri, pelvic inflammation, too early exertion or over-exertion, displacements of the uterus, and non-suckling. General weakness must be expected to exert an influence.

Multiparity had been said to cause subinvolution, but observation seemed to show otherwise. Premature labor had come under his observation too infrequently to enable him to draw any conclusion.

The effect of protracted labor had been differently estimated by different observers.

Lacerations of the perineum played an important part as a cause of subinvolution.

It did not appear from his analysis of one hundred and twenty-six cases that laceration of the cervix affected the process of subinvolution.

Pelvic inflammation retarded involution.

Too early exertion had been maintained, with good reason, as a cause of subinvolution. Special reference was then made to the views of Dr. Goodell, of Philadelphia, who advocated getting the patient out of bed on the fourth or fifth day. Dr. Williams had not ventured to follow the method, and, therefore, had no data upon it. The opposite method, however, had been used, and with equally satisfactory results, and with the avoidance, as it seemed to him, of serious dangers.

The influence of nursing had been usually held to be highly favorable to involution.

In making a *résumé* of the causes, Dr. Williams put down general debility (?), multiparity, and advanced age (?), post-partum hemorrhage, retention of portions of placenta and membranes, laceration of the perineum, and pelvic inflammations.

The *results* of subinvolution were hemorrhage, dysmenorrhœa, prolapsus.

The *treatment* consisted in the removal or prevention of the cause. Some were not removable, but post-partum hemorrhage, laceration of the perineum, pelvic inflammations, and retention of portions of the placenta and membranes could, in a great degree, be removed or prevented. Wounds of the perineum should be closed *at once*.

He did not think that *uterine* drainage was improved by the sitting posture, although drainage of the vagina was made better by it. The removal, however, of the discharges from the uterus and vagina was one of the chief questions in the treatment of the puerperal state. Vaginal injections should be commenced immediately after delivery, and repeated twice daily, at least, and should be abundant, hot, and contain a disinfectant. They should be abundant to insure absolute cleanliness, and the temperature should be 100° to 115° F. *Prevention* meant three things: (1) emptying the uterus, (2) securing a well contracted uterus, and (3) absence of fever. No better means for securing the second and third objects could be employed than hot disinfectant vaginal injections and closing wounds of the perineum.

Dr. W. S. Playfair thought that subinvolution was known by its effects rather than by the actual existence of anything which could be readily determined by physical examination. A very large proportion might have a subinvoluted uterus, but it was only when it was associated with other conditions that it was discovered. He was certain that in private practice subinvolution was not detected except by the morbid phenomena to which it had given rise.

Many of the causes mentioned were undoubtedly causes of subinvolution. But he was surprised to hear that traumatic injuries of the uterus had not led to subinvolution in Dr. Williams' experience. It was difficult to understand how laceration of the perineum should, in a large proportion of cases, give rise to subinvolution when not properly treated, and that laceration of the cervix itself should not produce that effect. Nor was it at all consistent with his experience, for he was satisfied that in a large proportion of cases there did exist more or less marked laceration of the cervix, and that this was an accompaniment, if not a cause, of inflammatory conditions about the uterus and subinvolution.

He thought Dr. Williams had done Dr. Goodell slight injustice by saying that he disapproved of rest after delivery; for his understanding of Dr. Goodell's paper was that he recommended, after delivery, to place the woman in the erect posture early for the express purpose of securing drainage of the vagina; and the posture was to be supplemented by vaginal washings.

Dr. Playfair was, however, greatly impressed with the importance of rest in the treatment of the puerperal condition, and he did not allow his lying-in patients to get up until ten or twelve days after delivery, and then to lie upon a sofa. He was equally certain with Dr. Goodell that the temporary use of the semi-erect posture, as sitting to pass water twenty-four or forty-eight hours after delivery, was an effective means of enabling the vagina to be thoroughly drained. That, of course, was upon the supposition the patient was otherwise perfectly healthy.

Dr. Henry Bennett said that there was nothing contrary to his experience in Dr. Williams' paper, if the discussion was restricted to the condition of the woman during the first two months after delivery. But if it did not involute, what occurred after the second month? This was an important question, and he discussed at some length the relations between subinvolution and chronic inflammation of the uterus and its surrounding tissues.

The discussion was continued at some length, but no new points were brought out. It was merely an expression of difference of opinion concerning a few points already presented, sustained, perhaps, by the history of one or two cases.

Ovariotomy at Fifteen Years of Age.—A girl, aged fifteen, had suffered for several years with a tumor in the left iliac region, which reached enormous proportions. She had been tapped four times, was very weak and emaciated. On operating, the cyst was found extensively adherent to the liver, stomach, walls of abdomen, etc. The tumor and contents weighed fifty-nine pounds. Recovery rapid and complete.—*Med. Bulletin.*

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 14, 1882, *to August* 19, 1882.

BILLINGS, JOHN S., Major and Surgeon. By direction of the President, relieved from duty as a member of the National Board of Health. S. O. 190, A. G. O., August 17, 1882.

BROWN, J. M., Major and Surgeon. Assigned as Attending Surgeon at Headquarters Department of the South in addition to his duties as Post Surgeon at Newport Barracks, Ky. S. O. 79, Department of the South, August 10, 1882.

HUBBARD, V. B., Major and Surgeon. Now awaiting orders, to report in person to the Commanding-General, Department of the Missouri, for assignment to duty. S. O. 186, A. G. O., August 11, 1882.

SMART, CHAS., Major and Surgon. By direction of the President, detailed as a member of the National Board of Health, organized under act approved March 3, 1879, vice Major Billings, surgeon, relieved. S. O. 190, C. S., A. G. O.

BYRNE, CHAS. B., Captain and Assistant Surgeon. The leave of absence granted him in S. O. 68, July 12, 1882, Department of the South, is extended two months. S. O. 189, A. G. O., August 11, 1882.

SEMIG, B. G., Captain and Assistant Surgeon. To be relieved from duty in Department of the Platte, and on expiration of his leave of absence on surgeon's certificate of disability granted him in S. O. 121, C. S., A. G. O., to report by letter to the Surgeon-General. S. O. 186, C. S., A. G. O.

WILCOX, T. E., Captain and Assistant Surgeon. To accompany Troop F, 1st Cavalry, to Fort Walla Walla, and then repair to these Headquarters for assignment to duty at Vancouver Barracks. S. O. 106, Department of the Columbia, July 31, 1882.

TAYLOR, M. E., Captain and Assistant Surgeon. Relieved from duty at Jefferson Barracks, Mo., and to report by letter to the Surgeon-General, S. O. 185, A. G. O., August 10, 1882. Granted leave of absence for four months. S. O. 188, C. S., A. G. O.

POWELL, J. L., 1st Lieut. and Asst. Surgeon. Confirms telegraphic instructions of this date to allow the Lieut.-Colonel Tenth Cavalry and Troops G and L of that regiment, and Asst. Surgeon Powell to continue, temporarily, and until further orders, at Fort Stockton, Tex. S. O. 84, Department of Texas, August 9, 1882.

MCCREERY, G., 1st Lieut. and Asst. Surgeon. Transferred from Fort Apache to Whipple Barracks, A. T. S. O. 119, C. S., Department of Arizona.

EBERT, R., 1st Lieut. and Asst. Surgeon. Relieved from duty at Fort Walla Walla, W. T., to accompany troop E, 1st Cavalry, to Boise Barracks, and on arrival there relieve Asst. Surgeon Wilcox from duty at that post. S. O. 106, C. S., Department of the Columbia.

RAYMOND, H. L, 1st Lieut. and Asst. Surgeon. Transferred from Whipple Barracks to Fort Apache, A. T. S. O. 119, Department of Arizona, August 3, 1882.

EGAN, P. R., 1st Lieut. and Asst. Surgeon. Relieved from duty at David's Island, N. Y., and to report in person to the Commanding-General Department of Arizona, for assignment to duty. S. O. 185, C. S., A. G. O.

WAKEMAN, WM. J., 1st Lieut. and Asst. Surgeon. Relieved from duty at Columbus Barracks, Ohio, and to report in person to the Commanding-General Department of the Platte, for assignment to duty. S. O. 185, C. S., A. G. O.

MACAULEY, C. N. B., 1st Lieut. and Asst. Surgeon. Appointed Assistant Surgeon, to date from August 10, 1882.

CHERBONNIER, A. V., Captain and Medical Storekeeper. Upon expiration of his present sick leave of absence to report in person to Lieut.-Colonel E. Swift, Assistant Medical Purveyor, New York City, for duty in the Medical Purveying Depot in that city. S. O. 188, A. G. O., August 14, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 19, 1882

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
August 12, 1882.	0	11	24	6	10	20	0	0
August 19, 1882.	0	33	28	5	9	29	0	0

DR. FRANCIS ATWOOD died at St. Paul, Minn., on the 5th instant, of typho-malarial fever, at the age of thirty-six. He had practised there eight years, and at the time of his death was unquestionably the leading oculist of the Northwest.

Dr. Atwood was a graduate of Harvard College, and of the Harvard Medical School, and studied his specialty with Williams and Von Graefe.

The following resolutions have been adopted by the Ramsey County Medical Society.

Whereas, In the Providence of God, our friend and associate, Francis Atwood, has been called away from us in the height of his usefulness;

Resolved, That as a society we hereby place on record our deep sense of the rare combination of qualities which endeared Dr. Atwood to us as a man and commanded our confidence in him as a physician.

Resolved, That, fully sensible of the loss that both our profession and the public have sustained in the death of Dr. Atwood, we deplore the event which has removed from us one so worthy in every way of the respect and esteem which he always inspired.

Resolved, That we tender to the wife and family of our friend our heartfelt sympathy in their great sorrow, and commend them for consolation to Him who is the only source of all true comfort.

Resolved, That a copy of these resolutions be sent to the family of Dr. Atwood, and that they be entered upon the minutes of this society, and be furnished for publication to the daily press of this city, to the Boston *Medical and Surgical Journal*, and to the New York MEDICAL RECORD.

D. W. HAND, *President.*

C. B. WITHERLE, *Secretary.*

HOMŒOPATHY IN THE GOVERNMENT SERVICE.—At the instigation of Philadelphia homœopaths and the

American Institute of Homœopathy, a joint resolution was introduced into the United States Senate by Mr. Don Cameron, and into the House of Representatives by Mr. O'Neil, of Philadelphia, which aimed to make it a misdemeanor for the army or navy medical boards to refuse to examine or, if qualified, admit homœopaths. The resolution was not adopted.

The National Board of Health is obliged to limit its work somewhat, owing to diminished appropriation. The Marine Hospital Service, however, has had $100,000 assigned it for use in helping local boards of health in case of epidemics.

The Chicago Medical Review no longer publishes a list of editors, but appears under the editorship of Dr. E. C. Dudley, with whom Dr. C. H. Lodor is associated.

Injuries from Toy Pistols, as well as deaths, have been very numerous in this city. On July 4th over fifty cases of children injured by these dangerous playthings were brought to our hospitals.

The Tenement-House Inspection now going on by the city Board of Health, continues to report good results from its work, particularly in the direction of educating the poor people to take care of their children and themselves. The mortality among children has, so far, not been excessive this season.

Surgeon-General Hamilton will lecture on surgery in the National Medical College, Washington, D. C., during the absence of Prof. J. Ford Thompson in Europe.

Sulphuric Ether is said to have the property of modifying the very persistent and unpleasant odor of oil of turpentine in mixtures.

Lycopodium can be put to an excellent use when sprinkled over oiled silk. It prevents the fabric from adhering together.

A Common Cause of Sick-Headache, according to Dr. Savage, of Jackson, Tenn. (*Med. and Surg. Reporter*, July 29, 1882), is hypermetropia and astigmatism, either alone or combined. The rational cure would therefore consist in wearing a properly fitted glass.

Natural History and "Education."—The following story is narrated by a correspondent in the *Students' Journal:* An English physician had recommended a patient to take plenty of horse exercise, so the gentleman went to a dealer's and looked at a horse, with the intention of purchasing it. He came back to the doctor with the following report: "I went," he said, "to the horse-dealer's, and saw a horse; he looked a very nice, steady animal, and I was going to buy him, but remembering it was a proper thing to look into a horse's mouth—but why I could not recollect—I put on my spectacles and examined his mouth. I was then delighted that I had not completed the purchase, for I found the poor suffering creature had lost nearly all his teeth; the only ones left that I could see being six on the top and six in the bottom jaw; and then came two great gaps without any teeth at all. I told the horse dealer it was cruel to keep a poor animal like that, without any teeth. The dealer assured me the animal had several more teeth in his jaws farther back, and I might put my hand in and try if I liked. I indignantly refused, however, to be taken in in this manner." Evidently in some "educated circles" the advance in natural history is quite astonishing.

Another Cure for Eczema.—Animal charcoal, freshly prepared and used as an ointment on the eruption, is a specific for eczema. So says Onocool Chunder Chatterjee, of India. That this remedy is a specific is unlikely, and that it is of marked value is improbable; but Dr. O. C. C.'s name is worth remembering.

Dr. Zoilo Perez, director of the *Journal El Criterio-Medico* has been elected a member of the Spanish Cortes.

The Princess d'Oettingen-Wallenstein has left fifty thousand marks to found a homœopathic hospital in Munich.

A Board of Health has been organized at Hot Springs, Ark., with Dr. L. S. Ordway as president.

Sanitarium at Elberon.—Mr. Charles G. Francklyn, in whose seashore cottage President Garfield died, has just founded and endowed a sanitarium for poor children, at Elberon, in memory of his young daughter, Gladys Francklyn, who died recently in Paris.

Invalid Loan Society.—In Newcastle, England, a new kind of organization has been established, called the Invalid Loan Society, whose object is the lending of clothing, furniture, and such other articles as will minister to the comfort of those who are both needy and sick.

Protection of the Natural Form of Woman.—In Kent, England, a band of young men, it is said, have established a society for the "Protection of the Natural Form of Woman," and, according to one of the rules of the society, bind themselves, "by demonstration, argument, and entreaty, to induce their sisters, and all ladies who are injuring their bodies for the sake of fashion, to sever the remaining link which connects the present generation with barbarism." By another of the laws the members promise to live a life of protest against the fashions so prejudicial to health.

Absorption of Sequestra.—M. Vrignal has lately made a series of experiments on the absorption of sequestra. He has determined that a sequestrum covered with pus will not be absorbed, while one enveloped in granulations will be. A fragment of bone (a bone peg) being driven into the tibia of a rabbit was almost entirely absorbed.—*Gaz. des Hôpitaux.*

A Modern Fable.—Some of the eccentricities of modern adulteration are delicately disclosed to the commonwealth of consumers by a contemporary German satirist, in the following neat little fable:

"There were once four flies, and, as it happened, they were hungry one morning. The first settled upon a sausage of singularly appetizing appearance, and made a hearty meal. But he speedily died of intestinal inflammation, for the sausage was adulterated with aniline. The second fly breakfasted upon flour, and forthwith succumbed to contraction of the stomach, owing to the inordinate quantity of alum with which the flour had been adulterated. The third fly was slaking his thirst with the contents of the milk-jug, when violent cramps suddenly convulsed his frame, and he soon gave up the ghost, a victim to chalk adulteration. Seeing this, the fourth fly, muttering to himself, 'The sooner it's over the sooner to sleep,' alighted upon a moistened sheet of paper exhibiting the counterfeit presentment of a death's-head, and the inscription, 'Fly Poison.' Applying the tip of his proboscis to this

device, the fourth fly drank to his heart's content, growing more vigorous and cheerful at every mouthful, although expectant of his end. But he did not die. On the contrary, he throve and waxed fat. You see, even the fly-poison was adulterated!"

THE WATER OF THE DEAD SEA.—Dieulafait found in one cubic centimetre of Dead Sea water enough lithia to show the spectrum of this substance at least a thousand times. The same water contains also so much boracic acid that it can be practically recognized in the residue from a single cubic centimetre of the water. Hence he infers that the present waters of the Dead Sea are the residues of the evaporation of an inland sea, analogous to the Caspian or the Kara Boghaz.

COMFORT AND DRESS.—The *Boston Journal of Chemistry*, August, 1882, has some apt and timely remarks on this topic, from which the following is quoted:

"One of the signs of advanced civilization is discomfort in dress: the farther any nation advances in civilization, the more she tortures her subjects, and, strangely enough, this infliction generally falls upon the so-called upper class. The educated class, the members of the liberal professions, the denizens of the city, the merchant and his clerks, suffer more than the poor laborer from heat, if not from cold. Advocates of 'dress reform,' who are trying to make women's dress more like men's, are asked to consider that the dress of a 'gentleman' is about as uncomfortable as if designed by the Evil One. It is the Western civilization of the nineteenth century that has developed this refinement of cruelty, compared with which pierced noses and lips and tattooed skin are most comfortable. The survival of the unfittest has led to its development, and now variations have ceased, so that there is no longer any chance for improvement or even change."

DUODENAL ULCER.—In the *Lancet*, Dr. Edward B. Gray reports a curious case of obscure chronic epigastric pain in a man otherwise apparently healthy, which teaches how difficult it is to diagnose duodenal ulcer. The patient, aged fifty-eight, had complained of pain "across the pit of the stomach and through the loins" for two years. He was well nourished, appetite good, epigastrium only slightly tender to pressure. He was regarded by his friends as a hypochondriac. Suddenly he vomited over twenty ounces of bright-red blood. He was ordered twenty minims of the tincture of the perchloride of iron every three hours, to keep to ice and iced water, and to remain absolutely at rest on his back. About midnight of the same day he passed between a pint and a half and two pints of clotted blood from the bowel. He passed no more blood, but two days subsequently he was suddenly seized with severe epigastric pain, fainted, and died in a few minutes. At the post-mortem, the stomach and intestines were found full of blood. The sole lesion discovered was a small, deep ulcer, of the diameter of a split pea, clean punched out of the otherwise healthy mucous membrane of the duodenum. At the bottom of the ulcer was a small perforation in the pancreatico-duodenal artery. The other abdominal organs were healthy.

MAN AND THE BACILLUS.—Dr. J. Milner Fothergill, in a letter to the *Philadelphia Medical Times*, referring to Koch's theory of the origin of tuberculosis, remarks, half jocosely: "Talk of the bitterness of death! It is nothing to the shadowy danger which overhangs us of a tubercle-bacillus getting into one's pulmonary alveoli in an unguarded moment, and when one's 'resistive power' happens to be impaired. Shadowy in the sense of invisible, not unreal! Is this what is meant by 'the doom of a great city?' Is the bacillus a relative of the poison-germ which slew Sennacherib's host in a night? We do not yet know the little creature intimately enough to say. But, really, the horrors which the mind conjures up of the dangers of the bacillus in the future are demoralizing. Suppose, now, that some change of the human constitution should favor the bacillus, just as the potato-field did the Colorado beetle, who had been happily quiet in his dietary of the leaves of the deadly nightshade, but who went on the war-path when the leaves of the other members of the Solanaceæ came within his reach. The imagination fails to conceive what may be the fate of man—to be slain by a foe more remorseless than any of the plagues of Egypt. Suppose, now, that the bacillus took such a new departure, and got ahead of our 'resistive power.' Why, man would be swept off the face of the earth! What an ignominious end, too! Man, in the plenitude of his power over the forces of nature, slain by an insignificant little bacillus!"

FALSE EYELASHES.—Labouchère says in *Truth*: "The Parisians have found out how to make false eyelashes. I do not speak of the vulgar and well-known trick of darkening the rim round the eye with all kinds of dirty compositions, or the more artistic plan of doing so to the inside of the lid. No, they actually draw a fine needle, threaded with dark hair, through the skin of the eyelid, forming long loops, and after the process is over—I am told it is a painless one—a splendid dark fringe veils the coquette's eyes."

HOW THE KAFFIRS TREAT MILK.—Milk hung up in a cow-skin sack till it becomes sour and thick is a staple article of food among the Kaffirs, and the milk-sack is such a sacred thing that no woman is allowed to touch it, and but one responsible man for the household has charge of it. A Kaffir who would drink sweet milk would be considered a babe.

ALCOHOL IN BURNS AND SCALDS.—Saturate a soft piece of fabric with alcohol, lay it over the burn, then cover it with cotton or finely picked oakum. This is the most cleanly dressing that can be adopted. It may be thought that alcohol applied to a burn will produce more pain; but try it, and you will be agreeably surprised to observe how quickly it will allay the pain; subsequently disturb the dressing as little as possible; wet the dressing occasionally with alcohol, and the result you will find better than by any other method.—*St. Louis Med. and Surg. Journal.*

THE RATE OF TRANSMISSION OF NERVE-FORCE.—René has made a large number of experiments upon the rate of transmission of nerve-force in man. He obtained $\frac{1}{50}$ of a second as the approximative duration of a cerebral act; and a rate of transmission of nerve-force in a sensory nerve of twenty-eight metres a second.

OXIDIZED WATER.—Paul Bert, following in the steps of M. Béchamp, has, by a series of experiments, discovered that oxidized water arrests fermentation from the presence of living organisms, but is inert in the presence of amorphous ferments (diastase, saliva, pancreatic juice, etc.).

Original Communications.

ON NERVE-STRETCHING.[1]

By W. J. CHANDLER, M.D.,
SOUTH ORANGE, N. J.

Part I.

The subject of nerve-stretching has recently attracted considerable attention in the medical world. It is not, however, a procedure of recent origin. Three hundred years ago, William Fabricius made forcible extension of the limbs for rheumatism and painful affections of the joints. But while this practice has never been lost sight of, its mode of action has been very imperfectly understood. Experiments in nerve-stretching were made by Harless and Haber in 1858; by Valentine in 1864; by Schleich in 1871; by Conrad in 1877; and more recently our knowledge of this subject has been very greatly increased by the labors of Neuman, Legaard, Vogt, Tarchanoff, Quinquand, Wiet, Brown-Séquard, and others (*Le Prog. Med.*).

Operative surgery may be said to have begun its labors in this direction when Billroth cut down upon the sciatic nerve expecting to find a neuroma. After a careful search, during which the nerve was lifted from its bed and more or less traction made upon it by the handling it received, no tumor was found. The wound was closed, somewhat to the chagrin of the operator. The patient, however, was relieved of his pain from the date of the operation. Here, then, was a successful case of nerve-stretching unwittingly done. Nearly three years later (February 15, 1872), Von Nussbaum, of Munich, performed the really first operation of nerve-stretching with a definite purpose. The case was one of spasmodic painful contraction of pectorals and flexors of the left arm and hand, caused by a bullet-wound in the neck and elbow. There was anæsthesia extending over the arm and the left side of the neck and face. During several years various modes of treatment (anodynes, stimulants, electricity, etc.), had been tried in vain. It was then that the illustrious surgeon determined to *cut down upon* and to stretch the nerves of the brachial plexus for the relief of the symptoms. The result was in every way satisfactory. The spasms were allayed, pain ceased, and sensation returned. It was about this time that Billroth appreciated the full significance of the results in his case, and published the details. These two operations opened a new field in surgery, into which surgeons looked with wonder, but were not apparently eager to enter. Paul Vogt, who published a small volume on this subject five years later (1877), was able to collect but fifteen cases.

Dr. J. H. Pooley (Columbus, O.), in August, 1880, published an article in The Medical Record (New York), with a summary of 67 cases, including those of Vogt's, and 30 cases of anæsthetic leprosy.

Fenger and Lee (*Journal Nervous and Mental Diseases*, New York, April, 1881) followed in April, 1881, with an admirably classified article and a brief account of 94 cases. One of the latest and most comprehensive articles on this subject, and one from which we shall frequently quote, appeared in the February and March numbers of the *Revue de Chirurgie*, Paris, 1882. These articles give a general review of the whole subject, and contain a tabulated list of 132 cases.

Professor Nocht, of Berlin, has collected 150 cases in which this operation has been performed, but I have been able to secure only a brief abstract of his paper (*St. Louis Clin. Rec.*, February, 1882).

The ground has been very thoroughly canvassed, and following these able writers, operators, and experimenters at so short an interval, I shall not be able to present much that is new; nevertheless, availing myself of their labors, and through the kindness of many friends in the profession, I am able to present to your consideration a much larger number of cases than has as yet been embraced in any single paper on this subject, and the conclusions drawn therefrom, by indicating the proper sphere and therapeutic value of the operation, may, I trust, be not unworthy of your attention.

ANATOMICAL LESIONS AND PHYSIOLOGICAL EXPERIMENTS.

In order that we may proceed intelligently, it is necessary to consider the changes that take place in the nerve and adjacent tissues when traction is made, *i.e.*, the *anatomical lesions;* and then to study the effects of these lesions in the dead and living animal —anatomical and physiological experiments. We gather most of these facts from Vogt, Quinquand, and Brown-Séquard, and are largely indebted to the excellent abstract made by Artaud and Gilson (*Rev. de Chirurgie*).

When the nerve of a living animal is stretched, there are certain changes wrought in the nerve-tubes, their sheath, and the capillary vessels. If the sciatic be examined one month after stretching, we (Latteux) find embryonic cells under the sheath, atrophy of the superficial fascicles, while the deeper fascicles are sound. According to Quinquand, the central fibres are intact; beside these are seen degenerated fibres, in which the myelin is clearly segmented. This degeneration commences at the point where traction was made, and extends along the tubes as far as the spinal ganglia, thus showing that stretching has a central action. It also, but not to so great a degree, extends along the peripheral extremity of the nerve. According to Shevving, this partial integrity explains the persistence of motility. Finally, beside these healthy and degenerated fibres, the microscope shows other fibres in the process of repair.

But these are not the only changes. The sheath and its vessels present equally important lesions. At the point of traction are numerous extravasations of blood. Above and below are also found extravasations in the sheath. These extravasations are always found in the same situation—the sciatic notch and the popliteal space, they are also found along the gluteal and peroneal vessels, *i.e.*, wherever the vessels for the nerves penetrate the sheath. These points have already been observed by Klum as being the favorite seat of disseminated neuritis.

These extravasations entirely disappear after five or six weeks. The fact that there are extravasations is shown (Vogt) by killing the animal with chloroform and injecting the abdominal aorta with the blue fluid of Thiersch. Portions of the sciatic nerve are then removed and hardened in alcohol and chromic acid. The microscope then shows dilatation of the vessels and numerous points of rupture. At these points the blue matter of the injection has entered the cellular tissue. This is al-

[1] Read before the New Jersey State Medical Society, May 24, 1882.

ways the case even when the operation has not given rise to any hemorrhage.

In some cases the sheath is sclerosed and thickened, and in all cases its adherence to the nerve is lessened.

Disturbances of nutrition take place *occasionally*, in the parts supplied by the nerve. The muscles may atrophy and the extremities (toes) slough off.

The important lesions then of nerve-stretching are, first, a loosening of the sheath of the nerve; second, extravasation of blood into the cellular tissue of the sheath; third, rupture of a portion of the nerve-fibres; fourth, dilatation of the vessels; fifth, nutritive changes.

ANATOMICAL EXPERIMENTS.

If we expose a nerve in the cadaver and to its free extremity attach a weight, we notice that while it has but little elasticity it is very *extensile*. By following Vogt we can show that this elongation not only takes place at the point where the nerve is exposed, but is distributed throughout its *whole length*. This distensibility diminishes from the centre to the periphery, and is proportioned to the normal movements of different parts of the body. By increasing the weights we shall finally reach the limit of distensibility and rupture the nerve. The point of rupture is variable, sometimes being near the attachment of the weight and again in a distant part of the nerve. Trombetta has ascertained the minimum weight, or force, necessary to rupture the different nerves in an adult man:

To rupture the sciatic				requires	84 kilos.
"	"	"	popliteal	"	52 "
"	"	"	crural	"	38 "
"	"	"	median	"	38 "
"	"	"	ulnar	"	27 "
"	"	"	radial	"	27 "

The force needed for therapeutic effects is not over one-half that required to rupture. A less amount of force is necessary in children than in adults, in women than in men, and in the feeble than in the robust.

PHYSIOLOGICAL EXPERIMENTS.

The results of Tutschek's experiments show:

First.—A single slight extension of the sciatic nerve increases reflex irritability in the corresponding limb.

Second.—A second extension immediately after the first diminishes that irritability.

Third.—A third reduces it below normal, but reflexes can still be produced.

Fourth.—A powerful stretching completely annuls all irritability.

The amount of force used likewise affects the *permanence* of the results. If the traction be slight, there result immediately anæsthesia, momentary spasms, and slight loss of motion. These effects all disappear within a few hours. If, however, the nerve is forcibly stretched, the paresis is greater, the anæsthesia more permanent, and the reflexes may temporarily disappear.

The *direction* in which traction is made is of importance. If the nerve be drawn in a direction *away from the spinal cord* there results anæsthesia with slight paresis. If the direction of traction be *toward the cord*, there results an equal amount of anæsthesia, but a greater paresis, together with a loss of reflexes. This is an important practical point, explaining why nerve-stretching is ineffectual in certain cases, and indicating a means for making it more effectual in others.

In neuritis (Vogt) stretching arrests the inflammation. This is shown by exciting a neuritis in a dog by an irritating injection into the nerve. Stretching is then done and the neuritis is checked. Some cases of optic neuritis (Wecker) seem to have been temporarily arrested in this way.

If the right sciatic of a guinea-pig be stretched there follows anæsthesia, not only of the parts supplied by the right sciatic, but also of those supplied by the left sciatic, and frequently of those supplied by the right and left crural; but while the anæsthesia in the right limb is persistent, that induced in the distant parts is transient. Again, if the right sciatic of a guinea-pig be stretched the usual anæsthesia of the right limb follows. Soon after the left sciatic of the same animal is stretched, and then follows not only anæsthesia of the left limb, but a *return of sensibility to the right limb.* This phenomenon (called by Quinquand "transfer of sensibility by irritation") proves that stretching has not only a peripheral, but also a central action.

One more experiment—that of Brown-Séquard, who makes in a guinea-pig a right lateral hemisection of the dorsal spinal cord. There immediately result a great hyperæsthesia and considerable loss of power in the right hind limb, while a very decided anæsthesia is produced in the corresponding limb of the other side. If now the left sciatic nerve be stretched, there follows in the left limb loss of power and a *return of sensibility*, while in the right limb the condition of hyperæsthesia is markedly increased. This hyperæsthesia is not confined to the region supplied by the sciatic, but extends to the region of the crurals, or even to the anterior extremities. It is always accompanied by a noticeable amount of motor paralysis. (Similar results were obtained by hemisections in the cervical regions.)

These experiments prove conclusively that stretching the sciatic nerve produces some *change* in the *nervous centre* with which it is connected, and *transmits* its effects through the *whole length of the spinal cord*, producing in the different parts of the body supplied therefrom certain more or less persistent *modifications* of *function*.

To sum up our knowledge from experiments, we conclude:

First.—That nerves are extensile, and can be elongated within certain limits without danger of rupture.

Second.—That stretching acts especially to interrupt the sensitive current, while it allows the motor current to pass.

Third.—That the motor current and reflexes are more affected by centripetal than by centrifugal traction.

Fourth.—That stretching acts on the nerve-centres, producing certain dynamic changes, and occasionally local disturbances more or less persistent.

Thus far scientific investigators have led us. Much that is of interest and practical benefit have they unfolded, but much is yet to be discovered, and we must leave this part of the subject still in the hands of those patient workers whose future researches will clearly establish many points at present obscure.

THERAPEUTIC VALUE OF THE OPERATION.

And now let us turn to the practical part of this subject and ask what benefit does nerve-stretching confer? Or, perhaps, at the present time, we ought to ask, "Does it confer any benefit whatever?"

We shall consider this (1) by a study of statistics as to *cure, failure, danger*, etc., and (2) by a review of the opinions of medical men.

To show what nerve-stretching has done, let me read briefly three cases:

I. (By Nussbaum.)—A Pole, aged thirty-five, eleven years previously fell from a height of six feet on a hard floor. He struck on his sacrum with sufficient force to produce complete paraplegia, with its attendant involuntary discharges. In time deep bed-sores developed and convulsions set in. At the time of the operation there were each day as many as one thousand clonic convulsions, during which the knees were violently drawn against the chest. The frequency and severity of the convulsions were rapidly exhausting the patient. It was then determined to stretch the crural and sciatic nerves of the right side. After the operation convulsions in the right leg ceased and sensibility returned. Two weeks later the left crural and sciatic were stretched with the same favorable results on the left side, and in addition voluntary power over the sphincters was regained. In ten days the patient, who had been eleven years in bed, was able to rise and walk about on crutches.

II. (George W. Callender, 1874.)—A man, aged forty-one, sustained a compound fracture of the wrist (1867). Twenty months later the arm was amputated at the wrist. Pain in the scar and painful twitching of muscles of the arm called for a secondary amputation, in 1869, at the elbow-joint. Pain still continued, and in February, 1871, a neuroma was removed from the stump, but without affording any relief. In July, 1872, the median nerve was divided, or excised (?), with no better effect. In January, 1874, the stump was painful, tense and glistening, and the pain extended along the corner of the median nerve, up over the neck and side of the face. Now at length, after seven years of suffering and four fruitless operations, the median nerve was bared down to the stump and thoroughly stretched. Immediately the pain ceased, the stump in a short time became normal, and the patient obtained permanent relief.

III.—But we are not compelled to travel three thousand miles to gather testimony. The operation has been done many times in this country, and several members of this Society, Dr. Dougherty, of Newark, Drs. William Pierson, Jr., and Buttner, of Orange, have contributed histories of interesting cases. One of these is a case of sciatica (Buttner) in a German, aged thirty-six years. The disease was of eight years' duration. Every known treatment at the hands of practitioners of different schools of medicine was unavailing, and the patient was steadily losing ground. The operation of nerve-stretching was decided upon and performed December 17, 1881. The right sciatic was exposed in its upper part and thoroughly stretched. The sheath was highly congested. The distention by stretching was sufficient to elongate the nerve about one and one-half inch. The wound was closed by sutures, and healing took place without suppuration. The pain immediately ceased, and except a little stiffness in the limb for two or three weeks after the operation, the recovery has been complete and permanent.

But all cases do not show such gratifying results. Failures are not infrequent, the relief is often only transient, and in some instances the symptoms have been aggravated by the stretching.

Let us then turn to the study of statistics. You will find in the tables appended to this paper a record of 400 cases.[1] Some of these 400 cases were not received in time to be incorporated in the tables, but will be found in the appendix with the unpublished cases. Of these, 270 were cured or greatly improved, 58 were temporarily benefited, and 60 failed to receive any benefit. In 10 cases the result is unknown, and 2 cases were made worse by the operation. Of these 60 failures, 34 were in traumatic tetanus, and 11 in locomotor ataxia and diseases of the nerve-centres. Removing these diseases, together with the optic nerve cases, we have remaining 260 cases, with only 14 failures, *i.e.*, less than 5½ per cent.; or, if we include among the failures the 6 doubtful cases, the total percentage of failures is but little more than 7½ per cent., leaving a balance of over 92 per cent. as temporarily or permanently benefited. This certainly speaks well for a rejected (?) operation, especially when we consider that in most of these cases relief had been sought in vain from every other source.

We shall gain a clearer idea of the proper field for the operation by considering separately the results in different diseases. There have been treated by nerve-stretching the different forms of neuralgia, spasmodic affections, contractures, epilepsy, paralysis, diseases of the optic nerve, anæsthetic leprosy, tetanus, and various diseases of the spinal cord.

(*a.*)—NEURALGIAS.

We have collected of sciatica, 70 cases; of neuralgia fifth pair, 37 cases; of traumatic neuralgia, 15 cases; of all other kinds of neuralgia, 30 cases.

1. *Sciatica.*—We have 70 operations for the relief of this affection. In 1 case only did it completely fail. In 3 cases it gave but a transient relief, and in 1 case the result is not recorded. In all the others (68 cases, 97 per cent.), the patients were either cured or greatly improved. In most of these cases the disease had existed for months or years. Some of the patients were bed-ridden, all were more or less crippled and discouraged. With a present full of torment, and a future holding out no hope of relief, some were sinking into a despondency which would either render them an easy prey to disease, or lead them to a more pitiable end—self-destruction. If from such a hopeless, helpless wreck, we can restore over ninety-seven per cent. to health and usefulness, we will do well to value the means by which such a transformation is effected.

Just here there is a very pertinent objection as to the permanency of the results. Many cases are reported soon after the operation as cured, when a longer observation shows a return of the disease. No one more than myself feels the force of this objection. I have carefully examined the reported cases, and have communicated with many of the operators in order to verify and correct the results, and I am satisfied that the record is essentially correct. But grant that some of these cases may relapse, permanent relief is still the *rule*, and those temporarily benefited are satisfied to have had even a transient relief from pain. As one patient expressed himself, "I would be willing to have my sciatic stretched every month if it would give me as much relief as I have had for the six months following the operation."

In several of the cases the effects of a first stretching were transient, while a second stretching was

[1] These tables will be given in Part II. of this article, in the next number of THE RECORD.

followed by complete recovery. In some cases a *slight amount* of traction has been followed by a transient effect, and necessitated a second more vigorous stretching to complete the cure. Or again, the force used has been too great, and has produced an unnecessary motor paralysis.

In chronic cases presenting considerable muscular atrophy the benefit is less complete. The atrophy is sometimes never entirely overcome. In those cases of central origin (cancer of envelopes of cord, etc.) less encouragement is afforded as to complete recovery. But in idiopathic cases of sciatica, those, too, which have resisted all other modes of treatment, we must consider nerve stretching as one of the most effective remedial agents we possess.

2. *Neuralgia of the fifth pair of cranial nerves.*—We have collected 37 cases, 29 of these are reported cured and 12 temporarily relieved. There were four failures, and in one instance the result is not recorded. In some instances of failure or temporary relief a subsequent excision of the nerve has been followed by recovery; although in one case (Lange) the division of the nerve in Europe, and a subsequent division some years later in this country, was followed by relief for only three months in each instance, yet an elongation done four months ago has, up to the present time, given perfect relief. In general, the result is not nearly so favorable after stretching the different branches of the fifth pair as after stretching the sciatic for sciatica. In other words, we must not expect to cure by nerve-stretching more than one-half of the cases of facial neuralgia met with. Over eighty per cent. will be either improved or cured, and about one case in every six will fail to receive any benefit whatever.

3. *Traumatic neuralgia.*—The results are very much the same as in the neuralgias not traumatic. Indeed, we do not see that the traumatism has any especial bearing upon the result. At the same time they are generally classified separately, and we have included 15 cases under this head. Of these 7 were cured, 4 permanently improved, 2 temporarily improved, 1 failed and in one case the result is not recorded. We can say that 11 cases (63⅔ per cent.) were cured or greatly benefited, while not over 2 cases (13 per cent.) failed.

4. There remain of the different forms of neuralgia 30 cases. Nineteen were cured, 3 greatly benefited, 2 temporarily benefited, 3 failed, and 3 are doubtful. Eight of these cases were accompanied by painful spasms, which, in some of the cases, were entirely and permanently allayed by stretching. In Nussbaum's celebrated case of intercostal neuralgia there was a temporary relief (Fenger and Lee), but the patient had become addicted to the opium habit, and his otherwise enjoyable respite was marred by the cravings of an insatiate appetite. The pains, however, soon returned, and as far as nerve-stretching is concerned the case is a failure.

The percentage of cured and improved in the different neuralgias are as follows: Sciatica, 97 per cent.; neuralgia of the fifth pair, 80 per cent.; traumatic neuralgia, 66 per cent., and various other forms of neuralgia, 75 to 80 per cent.

Considering the neuralgias as a class, we may safely conclude that they are appropriately and efficiently treated by nerve-stretching. We would not, however, advise a precipitate rushing into nerve-stretching as the initial step in the treatment of neuralgia, nor shall we be disappointed if the accumulation of statistics, and the results of longer observations shall somewhat lessen the percentage of cures; but we are well satisfied that many, *very many*, of the obstinate, intractable cases of neuralgia will be by the aid of nerve-stretching no longer an *opprobrium medicorum*.

(*b.*)—SPASMODIC AFFECTIONS.

Next to the neuralgias, the spasmodic affections offer a favorable field for nerve-stretching.

1. *Mimic spasms; spasms of the seventh pair of cranial nerves, or tic non douloureux de la face.*—There are 14 cases reported; 12 cures, 2 relieved (Hahn). The duration of the disease was from one to ten years. The facial nerve was stretched in all cases except one (Davidson's—infra orbital). The situation at which it was exposed was just at its emergence from the stylo-mastoid foramen. In one case it was exposed anterior to the ear (under the zygoma). The spasms ceased in all cases immediately after the operation. Facial paralysis followed in *every case;* and while it was ultimately recovered from, its duration was never less than two weeks, and, in one instance, it continued for five months.

It is well, then (as suggested by Artaud and Gilson) to weigh this fact in considering the advisability of the operation in individual cases, and to warn patients of the temporary inconvenience they must expect. We conclude, then, that nerve-stretching is a very proper procedure in these cases, inasmuch as it has never entirely failed, and, in nearly ninety per cent. of the cases has wrought a complete cure.

2. *Torticollis, or spasmodic affections in which the spinal accessory has been stretched.*—There are 11 cases; 7 cured, 3 relieved, and 1 unrelieved. In all cases the disease had existed for many years; in one case (Southam), twenty-three years. In one (Studsgaard), the movements of the head were rotary; in four, nerve stretching alone was performed; in six, exsection was combined with stretching. The results seem rather to favor the combined operation, although we think the operators were perhaps a little hasty in following with excision so soon after stretching, especially as two of the cases, in which stretching alone was done, were cured. In all these cases except one, the spinal accessory was the nerve stretched. Southam gives an account of the method of exposure and stretching of the nerve (*Lancet*, November, 1881).

We have included one case by Blum, in which a tremor of the leg was cured by stretching the sciatic. The patient was a girl of eighteen years, who had been hysterical from childhood. For four months the right leg had been in a constant state of tremor, and, while walking, became œdematous and congested. Rest in bed relieved the œdema, but the tremor persisted. The right side was anæsthetic, while hyperæsthesia existed on the left side. The sciatic was painful on pressure. The tremor ceased immediately after the stretching, sensation returned, and motility was unimpaired.

(*c.*)—CONTRACTURES.

There are 5 cases in the table; 2 cured, 2 failed, and 1 died during the operation, from the entrance of air into the veins. There are a number of cases of other diseases accompanied by contracture of the limbs, in which nerve-stretching has been done; but the results do not seem to be very encouraging, so far as the correction of the contracture is concerned. Nussbaum's case (No. 5) stands as a bright exception. We have not cases enough to pass judgment

as to the propriety of the operation, further than to say that it is admissible and might be undertaken when other means have failed and circumstances do not contra-indicate it.

(*d.*)—PERIPHERAL PARALYSIS.

Thirty-nine cases are found in the tables; thirty-three of these were due to anæsthetic leprosy, all of which were more or less improved. Reports of these very interesting cases are found in the *Indian Medical Gazette* and in the London *Lancet*. The permanency of the improvement it is not yet possible to safely affirm, as Bomford (*Lancet*) says in only a few instances has he been able to observe the patients for any length of time afterward. In one case which he reports the improvement persisted after a lapse of four months, so that the patient was able to do hard manual labor. Wallace reports a case (Fenger and Lee) in which recovery of sensation was perfect, the discolored skin became normal, and pain entirely disappeared. At the end of two months these conditions still prevailed, and the prospect of permanent recovery was encouraging.

There are 3 cases of infantile paralysis, 2 of which were not improved; 1 (Simon) was greatly improved. The boy, five years of age, had for three years suffered from a partial paralysis of the right leg. Treatment had been of little service; electricity had been used for two years without much benefit. Stretching the right sciatic was followed by rapid muscular development and a great improvement in the mode of walking. Dr. S. thinks the procedure is harmless, and, in many cases, may render aid otherwise unobtainable.

The three remaining cases of paralysis were paralysis of the hand and arm. The ulnar, median, and radical were the nerves stretched. Two were much improved and one was entirely cured. These results are unexpected and decidedly encouraging.

(*e.*)—EPILEPSY.

We have 4 cases—1 (Nussbaum's) reported cured, 1 greatly improved (Gillett's), and 2 (Czerny and Morton) only slightly improved. In all these cases there was an aura from the region of the nerve stretched. Prof. Nocht considers these results as hopeful; and perhaps they are relatively so when we consider the intractable nature of the disease we are seeking to cure. But, as with the contractures, we must wait until a much larger number of cases can be collected, before we can decide upon the value of the operation in this affection.

(*f.*)—DISEASES OF THE OPTIC NERVE.

It is surprising that any one should have thought of applying the operation to this nerve, and still more surprising that he should have been bold enough to put the idea in practice. It does not seem that one would be justified in stretching the optic nerve, even in cases which have been considered hopeless. Nevertheless, Kummel has stretched the optic nerve seven times without any bad effect. All the patients were blind. Once he observed œdema of the retina, but no hemorrhage nor any inflammation of the nerve. In some cases of atrophy there was slight benefit.

Wecker, of Madrid, reports similar investigations and negative results. We have not the details of any of these cases.

(*g.*)—DISEASES OF THE NERVE-CENTRES.

The value of nerve-stretching in these diseases has been very generally discussed of late, and the tenor of these discussions has done much to bring the operation into disfavor—far more than its merits in other affections should have allowed. Indeed, it was its success in these other diseases which caused its trial in the as yet incurable diseases of the spinal cord, and because an equal success has not resulted, the real value of the operation has been overlooked. We have collected 81 cases. In 14 the operation may be said to have failed; in 1 the result is not recorded; all the others (66) were benefited.

There are 57 cases of nerve-stretching for locomotor ataxia. In 16 of these the improvement was so decided and persistent that some of them have been reported in other papers as cured. We prefer to record them as "*improved*," as there are good reasons to believe that in this disease all cases operated on will, after a time, relapse. Twenty-seven received only temporary (few days to a few weeks) benefit. In 13 cases there was no improvement. In 1 case the operation seemed to be the cause of increased suffering.

These results show that 33 per cent. may be greatly benefited, that 40 per cent. may be temporarily relieved, while in 25 per cent. we must expect to see the operation fail entirely.

Dr. H. J. Boldt (New York), who furnishes six cases for this paper, concludes that in ataxia the "stretching of nerves is only to be advised for the relief of symptoms," and even then the "result is variable." He thinks it better to stretch the anterior crural than the sciatic in these cases.

Prof. Langenbeck (Berlin) attaches considerable importance to the method of operating. Stretching the sciatic in its middle or lower third is followed by less atrophy of the limb, as the muscular branches are mainly given off above this point. He considers that cicatricial tissue, by irritating the nerve, may give rise to troublesome symptoms. He conducts his dissection with the utmost care, and avoids, if possible, the division of a single muscular fibre.

As to the propriety of the operation in locomotor ataxia, he considers that while relapses have very frequently occurred, the relief afforded fully justifies the operation; and I trust that there are none who have witnessed the extreme suffering produced by this disease, who are not prepared to accept the correctness of this conclusion.

(*h.*)—TRAUMATIC TETANUS.

Fifty cases of traumatic tetanus, treated by nerve-stretching, were followed by recovery in 10 instances. There were 37 deaths, and in 3 cases no result is reported. These figures do not encourage very sanguine expectations as to the success in nerve-stretching in tetanus; but then we must remember that no other mode of treatment for this disease shows very flattering results. In many of the cases that terminated in death, the operation procured very complete relief from pain and spasm; in other cases, no such relief was obtained. It has been objected that the operation was an additional source of irritation; but we are convinced that if done early, and under an anæsthetic, it can do no possible harm. On the other hand, there are strong grounds for the belief that when the lesion can be localized, and the affected nerve discovered, the operation may, in a certain proportion of cases, do immense good. Again, it is objected that the recoveries were due to other means (medicines) than the operation. While the physician will not generally dare to risk his patient's life by omitting to use any available therapeutic agent, this has been

done in two instances, and the result left entirely to nerve-stretching. One of these cases recovered. We conclude, then, that it is a safe adjuvant to other treatment; and while it does not offer strong hopes of success, we cannot refuse its possible benefits to the subjects of this much-dreaded disease.

Prof. Nocht reports 24 cases; 4 cured by operation alone; 2 by operation and medication; in 3 no change at all; balance, temporary relief (*St. Louis Clin. Rec.*, February, 1882). Fenger and Lee reported 21 cases, with 9 recoveries (*Am. Jour. Nervous and Mental Diseases*, April, 1881). Artaud and Gilson report 28 cases, with 7 recoveries (*Rev. de Chir.*, March, 1882). In the tables accompanying this paper there are 50 cases, with only 10 recoveries. It is a somewhat significant fact that the larger the number of cases, the smaller the *percentage* of cures. We are inclined to think, on the theory of probabilities, that the percentage of recoveries will not be any less than that recorded in this paper (20 per cent.), and may perhaps exceed that recorded by Nocht or Artaud and Gilson (25 per cent.).

DANGERS.

The *dangers* of the operation are in general the dangers of any surgical operation. Five deaths have been reported. One, however, was due to chloroform (Langenbeck). A second was due to the entrance of air into the veins (Gartner). These are not justly chargeable to the operation. I cannot judge of the other cases, as the details are too meagre. Practically, there seems to be little to fear as far as life is concerned. There are other dangers, such as erysipelas, ulceration, hemorrhage, sloughing, keratitis, paralysis (not persistent), and occasionally syncope and convulsions, which it is well to remember, although they are infrequent and generally of trifling importance. It is not impossible, however, that violent and repeated stretching (Table (*g*) case 73) may produce shock enough to the central nervous system, already the seat of extensive organic changes, to precipitate the fatal termination, and it is proper to avoid very forcible traction in diseases of the nerve-centres.

The study of statistics leads us then to a most hearty endorsement of the operation in neuralgic and spasmodic affections, and to at least justify its use in tetanus and in some diseases of the spinal cord.

(To be continued.)

LAUDANUM TO INFANTS.—A fatal case of poisoning of an infant is reported from Keyworth, England, and is remarkable for the alleged smallness of the dose. A "drop" of laudanum was administered one afternoon with castor-oil, to an infant, three weeks old, for the cure of diarrhœa, to which the child had been subject from its birth. Shortly after, the child became suddenly very ill. At half-past five on the same afternoon it was seen by a physician, when the child was lying with contracted pupils, livid lips, skin covered with perspiration, small pulse, and slow respiration. It could be roused with difficulty, and speedily relapsed into its former state. Notwithstanding the administration of emetics, and the use of cold affusions, the child died thirteen hours after it was first seen. Death from one drop of laudanum has occurred before, but the repetition of an ascertained case of death after such a dose is worthy of record, if only to impress on the public and the profession the danger attending the administration of opium in any form to young children.

A CONTRIBUTION TO THE SURGERY OF THE LIVER.

BY JOSEPH RAUSOHOFF, M.D., F.R.C.S., ENG.,

PROF. OF ANAT. AND CLIN. SURGERY, MED. COLL. OF OHIO.

CHOLELITHECTOMY.

OPERATIONS on the biliary passages are not recent additions to surgical procedures. Although practised by Petit and others, and compared with similar operations on the urinary bladder, cholecystotomy could not maintain rank in the list of recognized operations. Lost for more than a century, its reinstatement was counselled by Thudichum, who, in 1859, expressed, in the clearest language, his approval of this operation, and even indicated the steps to be taken in performing it. Although Hanfield Jones and Murchison likewise indorsed operations on the biliary channels, it remained for our distinguished countryman, Marion Sims, to attract to them, in his practical way, that attention which is demanded by the importance of the diseases that attack the parts involved. Since the first unsuccessful operation, the gall-bladder has been incised by Kocher, Lawson Tait, and Keen. I would not include the cases of Brown and of Bryant, since in that of the former it was merely a felicitous accident that the gall-bladder emptied its contents externally, and in that of Mr. Bryant the operation consisted in nothing more than the splitting of an old-standing fistula.

A close scrutiny of the recorded cases of cholecystotomy reveals the fact that in none was the diagnosis accurately made, and in those in which an operation led to the removal of calculi, their detection was neither more nor less than a fortuitous incident. Precision of diagnosis has not even been deemed a pre-requisite of grave operative interference. In the case of Dr. Sims it was undecided whether the tumor was a cyst connected with the liver or a dropsical gall-bladder. In Mr. Tait's case the diagnosis lay between distention of the gall-bladder, tumor of the head of the pancreas, and enlargement of a floating kidney. In the cases of Kocher and Keen alone was a positive diagnosis of dropsical distention of the gall-bladder determined upon prior to the operation. Mr. Tait, in the remarks upon his successful case, observes that "fortunately our advanced practice in abdominal surgery makes our limited power of diagnosis in such cases of less importance," and he thoroughly agrees with Sims in that "we should not wait till the approach of fatal symptoms puts the diagnosis in unmistakable fashion, but that we shall make an early exploratory incision, ascertain the true nature of the disease, and then carry out the surgical treatment that the necessities of the case may demand." Nevertheless, the nature of the operative procedures to be adopted depends upon the character of the lesion and its accurate recognition. Who would open the abdomen for simple distention of the gall-bladder when aspiration not only gives temporary relief, but, when repeated, as in the case of Kretzschman, may lead to complete recovery? Unless a gall-stone, *obstructive* in its position, is positively recognized, one may be pardoned for doubting the justifiability of an exploratory incision until the safer method by repeated aspiration has been faithfully tried and found useless.

Thanks to the comparatively fixed position of the gall-bladder and large biliary passages, the diagnosis of an impacted gall-stone should not and does

not offer insurmountable obstacles. The following case will illustrate this fact, and the operation based upon it, so far as known to me, is the first projected with a distinct object in view; namely, the removal of an impacted calculus. For the history of the case, up to the time of operation, I am indebted to Dr. James T. Whittaker, the attending physician, who has kindly furnished me the following:

H. B——, aged seventy-six, has been deeply jaundiced for six months. During this time he has lost fifty pounds in weight. His stools are like putty; his urine has the color of tar. His general strength is so much reduced that he is not able to sit up longer than half an hour. He is tortured with tinnitus aurium. He has no appetite, and is profoundly dejected.

The liver is enlarged; its free border projects two and one-half inches below the margin of the ribs. The gall-bladder constitutes a large tumor, of the size of the fist, smooth, globular, and movable. There is some apparently slight ascites. It was apparent that the condition depended upon total occlusion of the common duct.

The diagnosis rested between gall-stone and cancer. In favor of cancer was the enlargement of the liver and the ascites. In favor of gall-stone was the condition of the gall-bladder. Against both conditions was the total absence of pain. He was a very intelligent man, and he stoutly maintained that he had never had an attack of pain. His daughter stated that he had suffered from pain five years ago, a fact which he could not recollect, but had never had pain since. Against cancer was the absence of any primary deposit.

In order to definitely determine the diagnosis, I concluded to explore the gall-bladder. Having fixed it by compression from below upward against the liver, I introduced the needle of the hypodermic syringe and withdrew it full of thin, clear bile. On the next day, April 20th, I fixed the gall-bladder, as before, and gradually and slowly pushed through the abdominal parietes, just below the gall-bladder, a long, fine needle, in fact, the longest and finest needle of the Dieulafoy aspirator set. After penetration of the peritoneum, there was no resistance whatever—it was as if in empty space—to the farther progress of the needle, which I advanced slowly and in a straight line in the direction, as nearly as could be determined, of the common choledochus duct. At the depth of four and three-fourths inches I struck a stone. The sensation was perfectly clear and distinct. It was a fine, delicate crepitus, unmistakable in its character. After penetration of the skin, there was no sensation whatever on the part of the patient. The needle was then withdrawn, and the patient experienced no more discomfort than after a hypodermic injection. Having had all the dangers of cholelithectomy freely set before him, in the presence of his family, and fully recognizing that he was slowly dying by inanition, feeling "life not worth living," as he said, he elected to take the risks of the operation.

On April 29th Dr. Whittaker and I had no great difficulty in detecting a calculus by the method described by him. An operation was now definitely determined upon at the request of the patient. It was performed on May 3d, in the presence and with the assistance of Drs. Whittaker, Dunham, Cilley, Kebler, French, and Davis.

Operation.—The patient having been etherized, the position of the gall-bladder was accurately fixed and an incision four inches in length made over it. It was made parallel to the median line, and extended a little below the umbilicus. To check hemorrhage, hæmostatic forceps were used and left in place until the peritoneum was reached. When all bleeding had been stopped, this was incised on the finger. A knuckle of intestine and fold of omentum now protruded from the wound, but were easily repressed by an assistant. The gall-bladder, distended to the shape and size of a large pear, then presented itself in the wound, from which there escaped about a quart of ascitic fluid tinged with bile. The hooded needle of an aspirator was next plunged into the most prominent part of the gall-bladder, and eight ounces of a light-green fluid withdrawn. The last two ounces were of grumous character and appeared to be the thickened secretion of the gall-bladder. With the finger in the abdomen, the latter could easily be traced to its termination in the cystic duct, where a firm concretion was readily detected. Having thus confirmed the diagnosis, the gall-bladder was fixed by three wire sutures to the upper portion of the wound and incised over a distance of one inch. The finger, introduced through this aperture, immediately came in contact with one large and two small calculi, which were easily withdrawn. The obstructing calculus, wedged in the cystic duct, could only be dislodged by extraneous pressure with the finger in the abdominal cavity. This accomplished, its seizure and extraction was easily effected. A fifth stone was next removed, but proved to be a fragment chipped from the impacting calculus. The gall-bladder was now empty and a probe introduced into the duct met with no obstacle. The omentum and loop of intestine were now thoroughly cleansed with carbolized water, the lower portion of the gall-bladder fastened by four sutures to the margin of the abdominal wound and the latter closed. A drainage-tube having been placed into the opening of the gall-bladder, iodoform was dusted upon the surface of the wound, the latter covered with a thick layer of absorbent cotton and a bandage applied. A hypodermic injection of one-half grain of morphia was then administered and the patient placed in bed. Time of operation, one hour.

Notwithstanding his age, the patient recovered admirably from the operation. One hour after it he was perfectly conscious and free from pain; pulse 84, and of good tone. Eight hours later his condition had not changed. He seemed cheerful, and desired to see the stones. About twelve hours after the operation, the cotton was found so saturated with a greenish discharge that the dressing was changed. From this time on the patient gradually sank. The pulse became more frequent, feeble, and irregular. The condition of stupor, which had supervened, became more and more pronounced until the patient succumbed, twenty-six hours after the operation. A post-mortem examination was not granted.

The large stones removed weighed one hundred and thirty-eight and one hundred and sixty-two grains, respectively. The unimpacted one was composite in character and of the shape and size of a pecan. The obstructing calculus was distinctly conical in shape, of dark-green color, and quite friable. It was evidently of quite recent formation. The smaller stones weighed nine, five, and four grains, respectively.

The immediate cause of death was failure of the heart's action, which stimulants, faithfully given, were unable to avert. That death would probably result

from the operation was expected by the patient and his family as well as by myself. The fact that it was the only means of saving a life that would have ended at best in a month, must stand as justification for so perilous an undertaking in one so old. The possible existence of a stricture of the cystic duct, although considered before the operation, did not warrant the denial to the patient of his only chance for life.

HEPATOTOMY.

Mrs. G——, aged thirty-two, mother of one child. The family history is good and patient always enjoyed good health until the beginning of her present illness. About five months after her confinement, she observed an increasing loss of strength and flesh, which continued until she became bedridden and was treated for what was supposed to be typhoid fever.

At the time of her admission to the Good Samaritan Hospital, January 7, 1882, the patient presented a greatly emaciated appearance and features pinched and distorted from long suffering. Her appetite was poor and particles of partially digested food were passed with the diarrhœal discharges, which numbered three or four daily. The patient complained of constant pain in the abdomen, and was harassed by dyspnœa which compelled her to retain a semi-recumbent posture. There was a slight cough which yielded a light, frothy expectoration. The hectic condition into which the patient had fallen, accounted for the profuse night-sweats which were of nightly recurrence, and attended by an elevation of temperature of from three to five degrees.

Physical examination.—Thorax greatly emaciated. Percussion and auscultation revealed no serious lesions of the thoracic viscera. Moist râles heard over both lungs. Heart normal, urine scanty, but normal.

The epigastric region was bulged out by a smooth, round swelling, which could be traced along the inferior margin of the chest-wall to within two inches of the axillary line. The tumor was very sensitive to the touch, yielded a flat sound on percussion and a distinct fluctuation. The attending physician, Dr. James T. Whittaker, made the diagnosis of an hepatic abscess and verified it by removing a small quantity of matter with a hypodermic syringe. Nearly two weeks of entreaty were required to obtain the consent of the patient to permit the evacuation of the purulent accumulation.

January 19th.—Three pints of thick, creamy pus were removed by means of an aspirator, a medium-sized needle having been thrust into the most prominent part of the swelling. The pus removed contained the elements of bile, but presented no detritus of liver-cells. For a few days after the operation, a marked amelioration of all the symptoms was witnessed. The pain and dyspnœa subsided, the appetite improved, and the night-sweats were less exhausting. One week after the aspiration it became evident that the sac was refilling, and in two weeks the tumor had regained its greatest dimensions. About this time (February 3d), there was observed a sudden clearing up of all the symptoms. The size of the swelling decreased and the patient felt in every way improved. An examination of the diarrhœal evacuations revealed the presence of a considerable quantity of pus, and for a week this discharge continued. With the disappearance of the pus from the stools, the swelling again increased in size and the general condition of the patient grew worse.

February 22d.—Two pints of pus were evacuated by aspiration, and one pint of tepid water, containing one ounce each of tinct. iodini and kali iodid., injected into the abscess cavity, where it was kept for fifteen minutes, when as much of it as possible was withdrawn. Although it was evident that the sac was not completely emptied, nothing more could be drawn into the aspirator. This tapping did but little good, for in ten days the patient had relapsed into her previous condition of dyspnœa, hectic, and exhausting night-sweats. In addition to these symptoms there now supervened most violent vomiting and gradually increasing œdema of the lower extremities. Seeing the uselessness of aspiration, owing probably to the presence of loose shreds of hepatic tissue, I concluded that in a free incision lay the only chance of the patient's recovery. Her condition at this time was almost moribund in character. Evening temperature, 103° to 105°; pulse, 120 to 150.

Operation.—March 9th, in the presence of Drs. Whittaker, Conner, Seely, Reamy, Kebler, and members of the class, the patient was placed under ether after two ounces of brandy had been given. By inspection and deep palpation it became evident that the abscess was irregular in shape, presenting the appearance of two quite distinct tumors, which were connected with each other and extended below the umbilicus. Over the most prominent part of the larger tumor an incision was made with the thermo-cautery. This incision, five inches long and extending to within an inch of the umbilicus, was made parallel to and two inches to the right of the median line. The peritoneum was next divided upon a grooved director and the abdominal cavity opened. Interposed between the abdominal wall and the surface of the liver there appeared a fold of the great omentum which, although not bound to the liver, could not be drawn aside. This having likewise been divided with the platinum knife, the surface of the liver was exposed and found normal in color and without a trace of adhesive inflammation. The liver was now attached to the wound in the abdominal wall, by means of six silver-wire sutures, two of which were placed on each side and one each to the upper and lower extremities of the incision. The wires were introduced by means of a canulated perineal needle and included the entire thickness of the abdominal wall, omentum, and one inch of the sac wall. Thus, when all the sutures were in position, an area of hepatic surface about one inch wide and three inches long was exposed. Along the entire length of this surface, I now made an incision with the thermo-cautery, the thickness of the liver-tissue divided being one-half inch. Vent was thus given to three and one-half quarts of pus. It flowed as from a spring, and at times was streaked with quantities of retained bile.

By this time the patient was all but pulseless, breathing badly, and apparently in articulo mortis. Injections of whiskey revived her sufficiently to permit the completion of the operation, which consisted in washing out the abscess cavity with a five per cent. solution of carbolic acid, and in the insertion of two drainage-tubes one-half inch in diameter and ten inches in length. Iodoform having been dusted upon the wound, this was covered with a thick layer of absorbent cotton and a bandage applied. Fearing the effects of immediate removal to bed, the patient was kept on the operating table for several hours, during which stimulants were administered and heat applied to the surface. Ten hours after the opera-

tion the patient had rallied sufficiently to converse in a feeble voice. She was entirely free from pain and relished the half ounce of brandy given every hour. Pulse, at this time, 120, and very feeble. To insure rest, a fourth of a grain of morphia was given hypodermically.

March 10th.—The patient passed a comfortable night, although at midnight a cold perspiration had supervened.

In the morning the bandage, which had been thoroughly saturated with pus, was removed, together with the drainage-tubes, and the cavity washed out with water at a temperature of 120° F. Beginning at 9 A.M., a constant stream of water, entering through one tube and discharging through another, was permitted to run through the abscess cavity until 5 P.M., with one hour's intermission. This continuous irrigation not only insured a thorough cleansing of the cavity, but felt very grateful to the patient, who slept several hours during the process. In the evening the wound was dressed as after the operation. Alcoholic stimulants, and a hypodermic injection were administered as on the previous day. Beef-tea and milk were frequently given.

During two weeks the process of irrigation, by means of a double syphon, was continued with good results. After the wound was thoroughly cleansed, a laryngoscopic mirror was introduced into the abscess cavity, and the enormous surface carefully surveyed by reflected light. This method of examination proved very useful, as it enabled me at different times to remove three large sloughs, each of which would have covered the palm of the hand. Even continuous irrigation did not suffice to effect their removal, as they had gravitated to the floor of the cavity and were too heavy to be washed out by the current of water. By the reflected light the pulsations of the aorta could be seen as they were imparted to the posterior wall of the abscess. At each dressing iodoform was dusted on the wound and into the drainage-tubes.

From the time of operation the vomiting and dyspnœa ceased. The swelling of the lower extremities disappeared within three days, the cough became less frequent, and the appetite increased so that it soon became ravenous. This led to the suspicion that sufficient liver-substance to sustain life had not been left—a suspicion soon dissipated by the improved appearance of the patient. The diarrhœa and night-sweats yielded to the exhibition of aromatic sulphuric acid and tonic doses of quinia. The discharge gradually diminished as the cavity became smaller, and the drainage-tubes were shortened. Six weeks after the operation the sutures were removed, and on measurement the cavity was found to hold about one ounce of fluid and discharge about two drachms of pus in a day. The wound granulated rapidly from sides and floor, and two months after the operation nothing but a sinus, one inch in depth, remained. This has completely closed, and nothing but a large stellate cicatrix remains to show that an operation has been performed.

Remarks.—The successful case which I have taken the liberty to report, presents a number of noteworthy factors. It illustrates, in the first place, the good results that can at times be obtained by appropriate interference in even the most desperate cases, and when death seems all but present. Again, it is a fair example of a large proportion of cases in which aspiration can be of no avail so far as the cure of the disease is concerned. Regarding this method of treatment, evidence derogatory to its efficacy is fast accumulating. Two years ago there died in one of our hospitals a man from whom, at four different times, I removed no less than three hundred ounces of pus. An operation of the character practised in the foregoing case, had it been permitted, would probably have resulted in recovery.

When repeated aspirations fail to bring about relief, what surgical measure is to be practised? In England, and particularly in India, whence so much of our knowledge of hepatic affections is derived, puncture by means of a large trocar is a favorite method. Murchison had already adopted a similar practice, allowing the canula to remain in position for two or three days in the hope of establishing an adhesive inflammation. Most of the cases thus treated succumbed to peritonitis. In a recent volume of the *Lancet*, Funnel reports six successful cases treated by tapping with large trocar, after previous superficial incisions had been made. Through the canula a piece of lint was drawn to act after the manner of a drainage-tube. Notwithstanding such remarkable results, the puncture of an hepatic abscess with a large instrument, and regardless of existing adhesions, must be attended by great risk of the entrance of pus into the peritoneal cavity by the side of the canula.

In the light of our rapid progress in abdominal surgery, it becomes more and more evident that the proper treatment of hepatic abscesses, in which a tumor can be distinctly felt, is that by incision. Begin, as a preliminary step, first cut through the abdominal wall down to the peritoneum, and procured its adhesion to the underlying liver. Volkman, in cases of hydatid cysts, analogous so far as their therapy is concerned, goes one step farther—divides the parietal peritoneum and dresses the wound and surface of the liver with antiseptic materials, until, in the course of several days, adhesion to the margin of the wound is obtained. With the value of antiseptic treatment still *subjudice*, and the questionable control exercised over the extent of inflammation produced, it is doubtful whether this method will hold its own by the side of that adopted in the above case.

At the recent meeting of the International Medical Congress, Lawson Tait referred to five operations for hydatids, and one abscess of the liver, treated after the method of Sims' operation of cholecystotomy, without one fatal issue.

The operation practised in this case was unattended by the loss of even a drop of blood. The incisions through the abdominal wall and liver were made with the thermo-cautery. Hemorrhage from the divided liver-substance does, at times, prove alarming. By means of the thermo-cautery, this danger is avoided, as well as that of purulent infection largely decreased. With it a large incision can be made, inspection of the cavity with reflected light or laryngoscopic mirror, and the removal of large sloughs rendered feasible.

It will be seen that Listerism was not resorted to. That it is by no means an essential of success has been well established. Is it even called for when a wound can be so thoroughly irrigated as in the above case, and the material that could produce infection is removed as fast as it is formed?

Dr. Patrick Heron Watson has been appointed one of the Surgeons in Ordinary to the Queen in Scotland, in the room of Professor Spence, deceased.

LOCALIZATION OF INTESTINAL CATARRH.

A Contribution to the Diagnosis, with some Remarks on the Treatment of the Same.

By HUGO ENGEL, A.M., M.D.,

PHILADELPHIA, PA.

FELLOW OF THE AMERICAN ACADEMY OF MEDICINE, ETC., ETC.

There has in general very little attention been paid to the localization of intestinal catarrh. In fact there is only one chronic catarrh of the intestines recognized. We have been satisfied to give to abnormal discharges from the bowels, if they are not caused by some other disease, and if no other general or local origin can be detected, the name of "chronic catarrh of the bowels." But, as regards treatment, it is of great value to be able to localize such catarrhal conditions. Nothnagel was the first to give this subject special attention, and his work, recently published,[1] especially stimulated me to continue my own studies in this direction. Concerning Nothnagel's observations, they were made mainly with the view of ascertaining the alterations in the discharges, while I noted specially other symptoms and signs by which a differential diagnosis in regard to the localization of this ailment might be made.

In these diseases the same rule holds good as in all others. The more correct our diagnosis, the more exact we are in our localization of the malady, and the deeper our knowledge of the morbid process involved; or, in other words, the less we leave to uncertainty, imagination, and speculation, the greater will be the improvement in our therapeutics, and the surer will be our success in treatment. Only in such a manner will we be able to find the limits of the action of remedies; to foresee in all cases, with an ever-increasing certainty, the effect of our therapeutical measures, and to remove any symptoms with the same directness as we can now prevent a febrile seizure of intermittent fever with quinine, lock up the bowels with opium, or cause vomiting with tartar emetic, or sweating with pilocarpia. I do not by any means intend to convey here the meaning that we should ever forget, in a given case, the general scientific treatment, based upon a thorough knowledge of the constitution of the individual, as well as of the whole morbid process underlying and forming the disease in all its bearings and complications, but I contend that it is frequently of great importance, while not leaving out of view the general treatment of the case, which always will be the main point, to possess the means to remove, if possible, any disagreeable symptoms, which are often the most annoying to the patient. In certain forms of cancer, for instance, where we cannot think for a moment of a cure, it must not alone be our object to prolong life, but also to make the latter as tolerable as possible. While, in some kinds of bowel-complaints we try, for a considerable time, our best to radically cure the cause of the morbid condition, we may as well in the meantime endeavor to remove the disagreeable pains, the annoying tenesmus, and the frequent discharges, till at last these cease by themselves by the cure of the ailment which produced them. To be able, however, to bring about the disappearance of any such symptom, we must have the means of doing so, and we can gain the latter only by making a diagnosis always as accurately as possible, and carefully noting the action of the remedies in each special case. To assist in achieving this important result in chronic catarrhal inflammation of the bowels is the object of the following communication.

There are different signs and symptoms by which we may know the locality affected in chronic intestinal catarrh. We gain the necessary information mainly from the following sources: appearance and condition of the discharges, nature of the pain, general constitutional affection, the presence or absence of nausea and vomiting, the original cause, the appearance of blood in the stools and its character, the secretion of the urine, the effect on the general nutrition of the body, and the condition of the skin.

To understand fully the morbid alterations in the discharges, as they are dependent upon the seat of the lesion as investigated by Nothnagel, we have to remember only the difference in the functions of the small and of the large bowels.

While bile, pancreatic and intestinal juice are the main fluids poured out for the purposes of digestion into the upper part of the small intestines, albuminous matter that escaped the stomach, starchy and saccharine substances not before changed by the saliva, and all fatty and oily material are acted upon mainly in this same upper segment. In an affection of this part of the intestinal canal such articles of nutrition will appear more or less undigested in the discharges, especially muscular portions of meat. In the lower segment of the small intestines, near the iliac valve, the contents are kept back to allow the absorption of nutritive material, which if not properly taken out here in consequence of a catarrhal condition of the parts, will become changed in character, be more fluid, of a more yellowish color, and mostly more acrid. In the large bowel hardly any chemical action and comparatively little absorption is going on, but here the fæces receive their ultimate color and form, both of which will suffer alteration if there is any disease in that part of the bowel present.

We will investigate now the alteration in the stools. The discharge of mucus only, without any admixture of fæces, generally indicates catarrh of the rectum, but the mucus might in such cases be also derived from the sigmoid flexure or the lower part of the descending colon. But even in severe chronic catarrh of the rectum and descending colon, with greatly augmented secretion of mucus, the fæces need not always be covered by the latter, *i.e.*, we would be wrong in excluding chronic catarrh of the lower segment of the large intestine simply, because there is no mucus to be found around the scybala. Hyaline, mucous granules, recognizable by the microscope only, and intimately mixed with the solid or pappy fæces, but without microscopically visible mucus, indicate catarrh of the upper large intestine, respectively of the small intestine, but without participation of the lower segment of the former. Small yellow mucous granules in the stools denote affection of the small intestines. If the stools, or only one part of them, give the typical bile-pigment reaction, we may form the conclusion of the existence of a pathological peristaltic in the whole large intestine and in the lower part of the small intestine, and according to the other conditions of the parts giving this reaction—containing small yellow mucous granules or not—we may suppose catarrh of the small intestine, or only augmented peristaltic motion. Epithelium colored by bile-pigment de-

[1] Zur Klinik der Darmkrankheiten, Jena, 1882. Zeitsch. f. Klin. Med., iv., 1, 2.

notes catarrh of the small intestine and indicates, at the same time, a rapid locomotion of the contents throughout the whole intestinal canal; the same may be concluded from the appearance of round cells colored yellowish by bile, and of yellow-stained oil-globules. When high fever is present the appearance in the stools of many muscular portions of meat, partly undigested, does not permit of any conclusion with reference to an intestinal affection. Abnormal quantities of muscular tissue may appear without fever, and without any affection of the bowels, whenever, from any cause, the peristaltic motion of the intestines is increased. And even if catarrh of the small intestine exists, the muscular tissue need not be augmented in quantity as long as the frequency of the stools is not increased. But if with absence of fever, certain signs (mucus, etc.) indicate existing catarrh, and then, at the same time, abnormal quantities of undigested muscular tissue are present in the fæces, we are justified in concluding, from their presence alone, that catarrh of the small intestines probably exists. The presence of starch in the stools has the same diagnostic importance regarding the localization of the processes. The anatomical change by itself, caused by the catarrh, does not produce any increase of fat in the stools. If accompanying a catarrh of the bowels the quantity of fat in the fæces is morbidly augmented, it would simply denote a coexisting increase of peristaltic motion.

As regards auscultation, it is of no value in bowel-complaints of catarrhal nature. We are not able to judge from the different noises, from their character, or from their seat, either the locality of the affection or the nature of the same. A noise heard over a part of the small intestine would not justify us in concluding that it had its origin there, as the sounds are easily transmitted from one locality to another, and never confined to the place that produced them. On the contrary, occasionally—when from other reasons the locality of the lesion is well known, conditions favoring the transmission of sound or diminishing the same, as hard fæces, great tympanitis, large quantities of fluids in the bowels—those gurgling and wheezing noises, generally heard by the ear over disturbed intestines, are clearer a distance away from the lesion than immediately over it. If very gentle, they are not spread so far and are more circumscribed, but they are then of no value. The same may be said of percussion in these lesions.

Concerning pain, the following indications may be relied upon: If the pain is of a griping character, the lesion is confined to the small intestines. If a person presses with his hands on the abdomen to ease the pain, this is also an indication of the same seat. Whenever the pain is confined to the neighborhood of the umbilicus, it invariably, *cæteris paribus*, indicates lesion of the small intestines; soreness is always felt immediately over the seat of its cause. If the abdomen is swollen without producing in the patient a sensation of fulness coming up to his throat, its cause is mostly confined to the small intestines, while the opposite should direct our attention mainly to the transverse colon as the probable seat of the morbid lesion. Certainly we always take it for granted that there is no other disease than "chronic catarrh of the bowels," the localization of which is the point in question. Constipation, either alone, or alternating with *small* fluid stools, or the latter by themselves, with localized pain over a sausage-shaped swelling, connected with soreness over the same, a feeling of fulness there, and fever, always indicate affection of the colon, generally of the cæcum—catarrhal typhlitis. Tenesmus and drawing pains, extending to the back and toward the anus, denote an affection of the descending colon, sigmoid flexure, or rectum. If the pain is relieved more by belching than by the escape of wind by the anus, the lesion is in the small intestine; the opposite is true of the large bowel. Great rumbling in the bowels, long-continued griping pains, gradually relieved by defecation, or by escape of wind, denote lesion of the large intestines; milder rumbling, the sensation of water running through the intestines, sharp, short, griping pains, suddenly relieved by escape of gas, either by belching or from anus, but generally becoming severer during defecation, and ceasing for a longer or shorter time immediately after, indicate affection of the small intestines.

Nausea and vomiting, especially the former, if present in chronic catarrh of the bowels, is mostly connected with lesions of the small intestine, and the same may be said of large, thin, yellowish stools, often acrid in character, and occasioning burning at the anus. A sickening sensation felt at the time the bowels are emptied of their thin fluid discharges, associated with a disagreeable, but not very severe griping pain, referred to the lower part of the middle of the abdomen, is one of the surest evidences of the existence of catarrh in the small intestines. And we may say, that the higher up in the intestines the seat of the catarrh, the more we are apt to note sympathetic irritation of the pneumogastric nerve and of the stomach. Inward fever, great thirst, and often a glazed or dry, usually however, a fiery red tongue, are often observed in catarrh of the small intestines. In catarrhal affections of the large bowel, there is commonly an absence of any constitutional symptoms, no nausea and no dry tongue. If pain is present here, it is apt to be more continuous and localized.

In the vast majority of cases, errors in diet disturb the small intestines, which also easily suffer in sympathy with other organs, while exposure to cold or infectious causes, will mostly seize as their prey either the large intestines or the lowest segment of the small. It is further worthy of notice that the large intestines do not suffer easily through sympathy with organs; *au contraire*, they are apt rather to draw others, especially the liver, into the morbid process they started.

If the fæces are streaked with blood, or the latter is intimately mixed with them, it is usually derived from the small intestine; the face has generally then a pale look, the pulse is rapid, and a feeling of warmth is experienced often at the seat of the bleeding. If the latter is abundant, there is great constitutional disturbance, the same as in all internal hemorrhages. Further, as a general rule, the blood is darker the higher up its source. And here I wish to mention, that it is by no means necessary for the blood to have been exposed to the action of the gastric juice to be black. In certain affections, where in consequence of impediment to the portal circulation, intestinal hemorrhages are apt to take place, the bile is usually altered in its pigment, and its influence is such as to impart a black color to any blood it has come in contact with in the upper part of the small intestines, *i.e.*, the blood must evidently have been fluid and just oozing out, to permit of the bile-coloring matter exerting this influence. Therefore black stools, owing their color to the admixture of altered blood and altered bile,

indicate the seat of the lesion to be in the small intestine, in its uppermost part. In hemorrhages from the large bowel, the blood generally accompanies the fæces in the form of coagula, or is of a light red color, which is especially the case in hemorrhage from piles.

Peculiar morbid alterations in the shape of the stools invariably are evidence of the disturbance existing in the large intestines.

As regards morbid changes in the secretion of urine, we can only say, with reference to chronic catarrh of the bowels, that the higher up in the canal the lesion, the less is the secretion disturbed; there is generally increased flow, if any alteration, while in affections of the lowest part of the small intestines or in lesions of the large bowel there is apt to be diminished secretion.

As a great part of digestion and absorption of nutritive material is carried on in the small intestines, a chronic inflammatory condition there will produce more decided emaciation in a shorter time than the same lesion in the large bowels. When a diarrhœa is said to have caused, with a remarkable rapidity, a decided loss of strength and weight, we can take it for granted that, *cæteris paribus*, we have to look for its cause in the small, and not in the large intestines.

There is still another point which will be of value in localizing the catarrh. When a person is affected with chronic catarrh of the bowels and an eruption breaks out on his skin, if only herpes at the lips, we may be almost certain that the lesion is confined to the small intestines. The same may be said of any form of stomatitis, if not caused by a morbid condition of the stomach alone or from local reasons, and if accompanied by chronic intestinal catarrh. If the seat of the latter is in the large bowel it will never give rise to any stomatitis.

And what is the importance of knowing, in a case of chronic catarrh of the bowels, which part of the intestines is the one affected? We will endeavor to answer the question as well as we are able to do at present. In future, when more attention is paid to the localization of this complaint, the result of treatment will alone be sufficient to make this question appear a superfluous one.

If local abstraction of blood, or counter-irritation by a mustard-plaster, a fly-blister, or any similar substance, is deemed advisable, they should be performed as near as possible over the seat of the lesion. If we wish to empty the bowels of their contents, we should use rhubarb, calomel, or podophyllin, in affections of the small intestines, and aloes and clysmata in those of the large bowel. For antiphlogistic purposes and to keep the bowels in splint, very small doses of sulphate of sodium and morphia (the latter by the mouth or hypodermically), as well as soothing emulsions of almonds, with a moderate addition of aqua laurocerasi will be indicated in chronic catarrhal inflammation of the small intestines, while injections of tepid and cool water—large injections of the fluid containing small quantities of bicarbonate and chloride of sodium, carried by a long, flexible tube up to the place affected if possible—and combined with these, opium in the form of suppositories, will answer best in such lesions of the large bowel. If an astringent effect is wanted in the small intestines, acetate of lead, nitrate of silver, sulphate of copper, bismuth, tannic acid, and kino should be prescribed, while in the large bowel the same end would be reached with astringent suppositories. In case of serious alterations in the mucous membranes of the small intestines, brought about, perhaps, by a long continued catarrhal condition, we know of no better remedy than subnitrate of bismuth and sulphate of sodium, the latter in two-grain doses only, employed uninterruptedly for a long period, while in the same condition of the large bowel we must endeavor to make a local application with a solid stick of nitrate of silver, and administer internally minute doses of ipecacuanha, which seems to possess a great alterative power on the mucous membrane of this part of the intestines.

If we have reason to suspect, from the nature of the discharges and from other symptoms, a morbidly increased peristaltic motion in the intestinal canal, we must endeavor to check the same. And as the effect of this increase will mainly be felt in the small intestines, where it is especially harmful, as it prevents the absorbing vessels from feeding on the too rapidly propelled contents, we will best achieve this purpose of diminishing the increased motion by the internal administration of morphia, or by its hypodermic injection in the neighborhood of the umbilicus.

If, on the contrary, the peristaltic motion is too sluggish, if a kind of paresis has taken hold of the alimentary canal (a very frequent occurrence in chronic inflamed conditions of the bowels), the local application of faradic electricity near the umbilicus and hypodermic injections of strychnia in the same place will do for the small intestines what the introduction of one electrode of a faradic battery into the rectum and the application of the other electrode over the ascending colon will achieve with the same good success in the large bowel.

But another great benefit, we derive from our knowledge of the exact locality of this chronic intestinal catarrh will be found in the administration of the diet. In affections of the small intestines we must avoid those substances which are digested there, especially large pieces of albuminous and all fatty material. It is well known that in some forms of diarrhœa—as for instance, in the entero-colitis of children—milk, a strongly albuminous aliment, is not well borne; in the foregoing we find an explanation of this fact. Rice-water, burnt flour-soup, oatmeal-gruel strained through muslin, soup made from toasted bread, a little butter, salt, and water (the German *Wasser-Suppe*) must form the main diet in chronic inflammatory conditions of the small intestines, while in the large bowel we simply have to avoid all such nutritious substances which might assist in forming irritating solid and large fæces. Therefore any fluid diet will answer here, besides eggs, oysters, small quantities of raw meat, etc.

We often hear in chronic bowel complaints that what was beneficial in one case proved detrimental in another. It is only necessary to make an exact diagnosis of the locality in cases of chronic intestinal catarrh, and then to watch carefully the action of our remedies, and we will soon discover which of the latter have invariably a better effect on the small intestines, and which on the large bowel. We have here a wide field for future observations, which should especially be made in large clinics and dispensaries in large cities, during the hot summer months, when such catarrhs are more frequent than at any other time of the year. The result gained will fully repay the labor spent.

507 Franklin Street.

Reports of Hospitals.

CITY OF LONDON HOSPITAL FOR DISEASES OF CHEST, VICTORIA PARK.

SERVICE OF DR. THOROWGOOD.

(Notes by DR. LAWRANCE HUMPHREY, House Physician.)

PHTHISIS TREATED WITH ARSENIATE OF SODA.

ALFRED L——, plasterer, aged thirty-four, living in Bethnal Green, was admitted into the Victoria Park Hospital under Dr. Thorowgood, April 13, 1881. The family history was satisfactory, and patient had good health up to nine months ago, when he took cold from getting wet; this resulted in an attack of rheumatic fever, and as this passed away it left a severe cough for which he has been under treatment for the last three months. The patient is of dark complexion, and on admission complained of shortness of breath, loss of flesh, night-sweats, and severe cough with much thick blood, streaked expectoration. Latterly the cough has induced vomiting.

Urine, specific gravity 1016, high colored, no albumen, alkaline, and contains some excess of phosphates. Temperature, 100°. Appetite fair. Tongue furred posteriorly; edges red.

Below left clavicle there is a "crack-pot" note on percussion, with cavernous breath-sound, and large crepitant râles. Posteriorly, in upper left lung, crepitant sounds very distinct. Heart sounds normal, and apex *in situ*. Right lung marked by rough, prolonged expiration. Cough very severe, with much straining and vomiting. Ordered:

℞. Acid. hydrochloric.....dil. ♏vj.
Liquoris strychniæ ..... ♏iij.
Infusi calumbæ..... fl ℥j.
M. t. d. s.—Pil .extract. opii, gr. ¼ omn. nocte.

April 22d.—Still throws up food as much as ever. Cough bad and appetite failing; physical signs unchanged.

℞. Liq. sodæ arseniatis ..... ♏ij.
Infusi calumbæ. ..... fl ℥j.
M. t. d. s.—Pil. ipecac. c. scilla, gr. x. omn. nocte.

May 5th.—Cough keeps him awake. Still vomits, but crepital râles have notably diminished over left chest. Thinks medicine heats his stomach. Reduced dose of liq. sodæ arseniatis to ♏j.

May 12th.—Has not thrown up food for last five days. Phlegm much less and lost all trace of blood. Continued the same medicine up to May 27th, when, his time having expired, he went home, taking with him some cod-liver oil and a quinine and iron mixture. At his discharge he had nearly lost his cough, had good appetite, clean tongue. Pulse, 84; temperature, 98° to 99°; but he had not gained weight, and still had distinct râles with cavernous breath-sound in upper part of left lung.

REMARKS BY DR. THOROWGOOD.—After one week of the arseniate of soda treatment in this case, all agreed that the physical signs in the left lung seemed rather better. As the patient seemed doubtful as to whether the mixture suited his stomach, the dose of the liquor sodæ arseniatis was reduced from two minims to one minim in infus. calumbæ, and very soon we observed the vomiting to cease, the patient was able to leave his bed, and improved steadily and speedily. The improved digestion had not yet had time to manifest itself in an increase of weight.

Points worthy of note appear to be also, that during three months' treatment at a chest hospital prior to his admission, he had been getting gradually worse, and continued thus to get worse until he was put on the one minim doses of the arseniate solution. The rheumatic attack in the first instance, the catarrhal origin of the lung disease, and the marked implication of the stomach, are all indicative of an arsenical preparation as being very well worthy of trial.

In chronic bronchitis, with vomiting, two minim doses of liquor arseniatis have proved, in Dr. Thorowgood's hands, eminently curative in numerous instances, and these cures have, for the most part, stood well for many months, and some for over two years, after which period no further information has been obtained.

Progress of Medical Science.

SIMPLE TREATMENT OF EXCESSIVE SWEATING.—Dr. T. H. Currie, of Lebanon, says, in the *Michigan Med. News*: "For over thirty years I have used the following prescription, without a single failure, in sweats from whatever cause: Alcohol, O. j.; sulphate of quinine, ʒ j. Wet a small sponge with it and bathe the body and limbs, a small surface at a time, care being taken not to expose the body to a draught of air in doing it. In one case, a neighboring physician was poisoned while dressing a mortified finger. He suffered untold misery, and was drenched with perspiration for a number of days, and his life despaired of. When I saw him, I ordered him to be bathed immediately in the above solution, and that this be repeated once in two hours. The third application stopped all perspiration, and convalescence began at once."

TREATMENT OF FACIAL ERYSIPELAS BY SCARIFICATIONS AND OPIUM.—Dr. V. Netzetzky, of Russia, describes (*Vracheb. Vedom.*, No. 11, 1882) a treatment of erysipelas successfully practised by native barbers, and consisting in numerous superficial vertical scarifications made by a razor over the whole diseased part. After the bleeding spontaneously stops, they moisten the affected surface by an aqueous solution of opium (two grains to the drachm), and cover with a layer of cotton-wool. Rapid cure follows, as the author alleges; he himself observed two cases successfully treated in this way.

DIAGNOSTIC SIGNIFICATION OF THE ALVEOLAR EPITHELIUM OF THE LUNG IN SPUTUM.—The large granular epithelium that appears in sputum, Bizzozero considers undoubtedly proceeds from the alveoli (*Centralb. für Klin. Med.*, p. 529, 1881). He recalls the fact that in the alveoli there are two distinct kinds of epithelium, viz.: broad squamæ, and smaller, but thicker, and more granular cells. It is the latter class that undergoes rapid proliferation in inflammation, the other remaining unaltered. And it is the latter class that appears in the sputum. When present in large quantity in abundant sputum, they form a bad symptom, as indicating a general catarrh of the alveoli, but if in small quantity, they have no significance.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, September 2, 1882.

THE DECREASE IN DEATHS FROM CHILDBIRTH.

It is just a hundred years since the expectation of life among English women became equal, for insurance purposes, to that of men. Prior to 1772 women were compelled to pay an extra charge. At present the female expectation of life is about three years in advance of that of males.

A great factor in this prolongation of life is undoubtedly the increased knowledge and skill as regards the management of pregnancy and childbirth. There is hardly any progress in the past century which can be contemplated with such deep satisfaction as this diminished mortality rate.

Some figures recently collected by Dr. E. H. Sieveking may here be cited in illustration:

The mortality of lying-in women in London was, in 1660 to 1680, 1 death to 44; 1700 to 1740, 1 death to 70; 1760 to 1780, 1 death to 82.

In the Hotel Dieu, Paris, in 1786, it was 1 in 15.

At the beginning of the century the hospital mortality declined very much, while the total mortality also became considerably less.

In Prussia, in 1817, it was 1 in 112. In the whole city of London, during the years 1780 to 1820, it was 1 in 108.5.

From this time there has been an almost steady decrease in the death-rate of parturient women. This may be shown by a table compiled from statistics given by Sir James Simpson and Dr. Farr:

Years.	Proportion of maternal deaths in childbed: England and Wales.
1839	1 in 169
1840	1 in 168
1841	1 in 170
1842	1 in 192
1847	1 in 166
1851	1 in 192
1881	1 in 263

A distinction has to be made between the mortality rate of primiparæ and multiparæ. Among 36,776 cases collected by Hardy and McClintock, Matthews Duncan and Johnson, and Sinclair, the ratio of deaths among primiparæ was 1 in 62; among multiparæ, 1 in 124. This is certainly too high a rate, however, to represent the present state of affairs.

We can say now that whereas one hundred years ago 1 mother out of every 80 died in childbed, at the present time only 1 in 260 to 270 fails to survive. Obstetricians, midwives, sanitarians, all lay some claim to this prodigious advance in the saving of life. No single class or single influence, however, can be considered to have special and exclusive merit. Much is due to the advance in general knowledge and intelligence. More is due to the medical profession, undoubtedly, than to any other one agency.

SHALL THE TRAVELLING MESMERIZER BE ABOLISHED?

A new and curious medico-legal question has recently been raised in the Swiss courts, an account of which is given in the *Correspondenz-Blatt*.

In 1880–81 a famous "magnetizer," Donato, travelled through Switzerland giving exhibitions. One of the results was the development of a *furor* for mesmerizing each other, especially among the young people. In July, 1881, a young girl applied for admission to the Maternity Hospital at Berne, saying that she was pregnant. She stated further that being visited by a young man one evening, he mesmerized her and then violated her person. She was delivered of a child in September. Her story reached the ears of the "juge d'instruction" of Berne. He caused the matter to be investigated. Dr. Ladame, of Neuchatel, was appointed to investigate the matter. He did so, and gave a very elaborate report thereon. The question is, he says, an entirely new one in medical jurisprudence. There exist only four cases reported in medical literature.

These four cases are cited at length by Dr. Ladame, with the opinions of experts given upon them at the time. In one case the plea was asserted to be a fraud, because the woman was able to give a full account of the affair. This, in all cases, it was agreed, showed that the state produced could not have been a hypnotic one.

The other cases showed that violation could take place during "nervous sleep" without the knowledge and against the desire of the woman.

This opinion, sustained by Tardieu, Brouardel, and others, is one which would naturally be drawn from the known characteristics of this peculiar condition; and it may become a matter of importance in the future that this fact be known to medical men. The question will at once follow whether travelling mesmerizers should not be forbidden to exercise their arts. The influence which they exert upon the

health of their subjects is certainly not good. Should it become known that mesmerizing is a simple thing, and that a certain per cent. of young women are susceptible to the hypnotic condition, bad results to morals might follow.

On the other hand, the plea that violation was done by the help of mesmeric practices will almost always be difficult to prove. Dr. Brouardel, indeed, asserts that since the researches of Charcot it is possible to distinguish absolutely the hypnotic condition from simulation. This view is not, however, as yet generally accepted.

We trust that the subject may continue as rare and novel as it is now, though this can hardly be expected.

BORO-GLYCERIDE.

A SOMEWHAT sensational article has been going the rounds regarding the remarkable preservative and antiseptic properties of a substance called boro glyceride. Professor Barff first described its properties in a paper read before the Society of Arts, London. This gentleman stated that fresh meat soaked in boro-glyceride, then dried in the sun and packed in casks, was sent from the Falkland Islands to England uninjured. Oysters were preserved for three months. Pigeons and beef were kept for seven months, and were then made into pie with eggs that had been kept for six months. Milk and cream were also kept for a long time. The preserving fluid has very little if any taste. A number of other experiments showing its powers were cited.

In a paper recently read before the Kings County Pharmaceutical Society, Mr. Thomas D. McElhenie gives the details of the preparation of the new compound and also relates some experiments showing its power as a disinfectant. He states with justice that if it has the remarkable properties claimed, there will soon be a demand for the article by surgeons. Neither glycerine or boracic acid has the preservative powers attributed to their compound, which is made as follows:

Ninety-two parts of pure glycerine are heated to about 300° F., and sixty-two parts of boracic acid are gradually added. Steam is given off, owing to the water which is formed and set free. The operation, in quantities of five pounds or more, requires about a day to complete, as the viscidity of the melted mass allows the steam to bubble out very slowly. It is known to be finished when it ceases to lose weight and dissolves freely in water at ordinary temperature.

The product is solid, brittle, and transparent when cool, has a light amber color, and a shining fracture. It is freely soluble in warm water. It is sparingly soluble in cold alcohol, and in five parts of the same at 120°. It is insoluble in ether and chloroform at ordinary temperature. The hot alcoholic solution will, says Mr. McElhenie, probably be found an excellent means of impregnating absorbent cotton with boro-glyceride for surgical use.

If boro-glyceride be melted and an equal weight of glycerine added, a dense, clear mixture is obtained, which remains fluid on cooling, and is a very convenient form for many uses, being fifty per cent. by weight of the antiseptic.

The five per cent. solution is not affected by tannin, tincture of chloride of iron, Monsel's solution, or the mineral acids. These points, it is suggested may prove useful in treating diphtheria, when an antiseptic spray is employed.

As regards its preservative powers, Mr. McElhenie found that two eggs mixed with ʒ ij. of the ten per cent. solution were still good at the end of a month. The juice of two pounds of beef was kept fresh by ʒ ss. of the boro-glyceride.

The statements about this substance are very much like those which were made regarding salicylic acid when that drug was first introduced. Boro-glyceride, we are told, is less injurious and has little taste; but it remains to be shown that meat soaked for months in it can still continue palatable.

As regards its antiseptic properties and usefulness in surgical dressings there is no reason to doubt that it will be serviceable. Boracic acid alone is known to be a valuable agent for the surgeon. There can result no harm in the profession's testing the value of a substance which seems at least to be innocuous.

PRE-NATAL EDUCATION AGAIN.

DR. FRANKLIN C. CLARK makes an attempt, in the Report of the State Board of Health of Rhode Island, to treat seriously the subject of pre-natal education. His article has the merit of briefness, and it contains some truths, which, even if already known, cannot be too often repeated.

It has been a theory with lazy educators, and easy-going parents, that children will grow up as nature made them, and that their adult character is essentially a congenital affair. No doubt there are many children with but little plasticity. But it is the conclusion of the best scientists, that each generation has great power over the acquired as well as natural gifts of that which follows. The late Mr. Carlyle used oracularly to say "Man is a fingent plastic."

How best to increase this power over the succeeding generation is one of the problems of the modern educators. According to Dr. Clark, some educating influence can be exerted before birth. His conclusions, which are not very rich in practical suggestion, may be quoted here. After citing some familiar facts regarding heredity, he says:

That education may be of two kinds, namely, before birth and after birth.

That maternal influences exercise control over

the unborn child from their close relation with heredity.

That a perfect understanding of the laws of heredity leads to the proper kind of pre-natal education to be adopted.

That previous education of both parents, especially of the mother, makes the pre-natal education more easily moulded to hereditary tendencies.

That a careful attention to the mother during gestation is followed by the most happy results.

That the creation of tendencies, or predispositions, is all that in the present state of science can be expected.

How much can really be done to affect the child *in utero* is a point discussed at some length by our author, but we confess that he throws very little light upon it. It is generally conceded that powerful and prolonged mental and physical impressions exerted upon the pregnant mother will affect the offspring. There is no doubt that it is better for her to live a quiet and easy life. But that special agencies used upon the mother can produce special effects upon the child is certainly not true except in the rarest cases. And so far all historical studies and medical experience show little more as regards pre-natal education, than that the mother should be placed in good hygienic surroundings with as little physical work or mental worry as possible.

TRUMPED-UP LUNACY.

According to statements made in the daily press, there have recently been three cases of sane persons wrongly imprisoned in insane asylums. The most notorious of these is that of a lawyer, living in Yonkers, who was taken to the Utica Insane Asylum, and detained there for about three months. He was then removed by order of the court, the judge avowing, when the discharge was given, that the patient was not and never had been insane. The story of Mr. Silkman's experience in the asylum runs through three columns of the New York *Herald*, and is most affecting, if true. He states that, owing to certain pecuniary and other difficulties with his son, that young man arranged a conspiracy for his imprisonment.

Mr. Silkman is sixty-two years of age, and of an emotional temperament. He had recently joined the Land League, and was a warm advocate of the Irish cause, which fact was one of the evidences of his insanity. He states that his mental condition was examined into by only one physician, who saw him for but five minutes. The other signer of the certificate did not see him at all, nor did the judge. When at Utica his trials were very great. He had poor food, poor quarters, menial work, and harsh treatment. The sufferer's denunciations of Dr. Gray are very bitter. He was taken finally to the Middletown Asylum, which he praises highly. In contradiction to the opinion of the Utica authorities, he was here pronounced sane.

Mr. Silkman's story of his asylum life is exaggerated, and in some details manifestly untrue. Any one reading it carefully would think it not impossible that the narrator should have been insane. There are, however, stronger evidences here of mistake or foul play than is usually the case in newspaper stories of this kind. The alleged irregularity in commitment and the disagreement in diagnosis among the asylum experts are particularly deserving of inquiry.

Whatever be the actual facts, we find in this and similar cases a strong argument for the more thorough supervision of asylums by a competent and trustworthy board of commissioners. If the public knew that such a board, in whom it had confidence, was regularly inspecting asylums, there would be fewer grievances and fewer necessary and unnecessary newspaper sensations.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 28, 1882.

Dr. E. C. Seguin, President, in the Chair.

Dr. Heineman presented specimens illustrating

MULTIPLE SARCOMA.

Garrett S——, aged forty-seven; Ireland; widower; rockman; was admitted to the Roosevelt Hospital May 8, 1882. Eight weeks ago he first noticed a tumor in the right parotid region, which has since grown rapidly but painlessly. Has not emaciated. On admission he had a tumor 4½ by 3½ inches in the right parotid region, firm in consistency, movable, and without adherent skin. There was also a tumor involving the outer third of the left clavicle, and the head of the left humerus. There was pain in left arm at times, and slight loss of power.

May 13th.—Had a chill. New tumors discovered. Has considerable pain at times.

June 15th.—Tumor of neck and tumors elsewhere increasing in size, and new ones are appearing. Gradually failing.

June 24th.—Died at 3.45 P.M.

Autopsy, made June 25, 1882.—Brain and cord were not examined (permission refused). The heart, liver, spleen, stomach, and intestines were normal, except slight catarrhal inflammation of the latter. The *lungs* contained a few yellowish tumors of the size of a pea. Surface of lung adherent in a few situations to the costal pleura and tumors of the ribs by firm adhesions. Lungs congested and œdematous. Kidneys contained a few pea-sized nodules. Large tumor of right parotid adherent to basis cranii and transverse processes of first and second cervical vertebræ, firm in consistency, yellowish white in color. Tumors, varying in size from a pea to a goose-egg, existed in the subcutaneous connective tissue. Tumors involving the ribs, of varying size and in different stages, the larger causing absorption of the bone. Tumors of the left clavicle and of the head of the left humerus; bone of the latter completely absorbed, only the shell of articular

surface left. The bronchial glands contained new growths. The cervical and lumbar glands were enlarged. There were tumors of the omentum.

Dr. Heineman remarked that the kidney in cases of retro-peritoneal tumors of this character was frequently apparently involved, but closer examination usually showed that the kidney structure was not invaded.

Dr. Carpenter had observed the same appearance in cases of retro-peritoneal growths.

TYPHUS FEVER—DIFFICULTY OF DIAGNOSIS.

Dr. W. M. Carpenter presented, in behalf of Dr. T. E. Satterthwaite, a number of microscopic slides, exhibiting the changes that had taken place in the heart, liver, and kidneys, in a case of typhus fever that occurred at the Presbyterian Hospital. The main facts were as follows:

Bridget R——, aged forty; married, and a native of Scotland; was admitted to the Presbyterian Hospital on May 4, 1882, at 5.35 P.M. Being delirious at that time no intelligent statements were obtained, but it was learned that a physician had visited her at her home and, it was said, had treated her for a fracture of the ribs, which she claimed to have sustained from falling against a stove. Pleurisy was also said to have resulted from the fractures.

Subsequent facts threw doubt on this story, which emanated from some of her friends; for it was found later in the history of the case that shortly before admission to the hospital she had moved from a house in East Forty-seventh Street (possibly from one of the now famous nests of typhus, Nos. 335 and 337), where there had been sixteen cases and two deaths.

The patient was carried into the hospital on a stretcher. Pulse, 142; respiration, 36; temperature, 103¾° F. There was a slight dusky eruption on the chest. Urine albuminous. Patient refused most of the nourishment that was offered her. Soon became comatose and never regained her consciousness. No fracture of the ribs or pleuritic rubbing found on examination. On the following day (May 5th) an eruption was noted over the entire body. The variety seen in the anterior surface consisted of spots varying in size from a pin's head upward. Pulse now was barely perceptible. Temperature (axillary), M., 102½°; E., 104½° F. Death at 10.05 P.M., twenty-eight and a half hours after admission to the hospital.

Autopsical examination, sixty-four hours after death. Drs. T. E. Satterthwaite and W. H. Porter present. Body well nourished. Rigor mortis well marked. Dark purple eruption over the anterior surface of the trunk and extremities, not disappearing on pressure; extensive post-mortem ecchymoses over the dependent portions of the body, the hands and feet excepted.

Thoracic cavity.—Pericardial sac contained three drachms of bloody fluids. Heart enlarged; weight, fourteen ounces; soft, flabby, and fatty. Ventricular walls thin. Valves free and sufficient, but the mitral showed evidence of fatty degeneration, and the upper margins of Valsalva's sinuses were marked by fatty or calcareous changes. Post-mortem staining of all valves and of the aorta.

Right lung.—Free from adhesions. Hypostatic œdema. Weight, twenty-six ounces. *Left lung.*—Lower lobe adherent to chest-wall diaphragm by old pleuritic adhesions. Hypostatic œdema. Weight, twenty-three ounces. No fracture of any rib, and no indication of recent pleurisy.

Abdominal cavity.—Spleen enlarged and almost diffluent. Weight, nineteen ounces.

Kidneys.—Right: Capsule somewhat thickened and adherent and fatty (parenchymatous change). Weight, eight ounces. *Left:* Contains evidences of an old cyst, but in other respects is similar to the right. Weight, nine ounces.

Liver.—Enlarged. Weight, sixty-nine ounces. Soft, fatty, and showing evidences of portal congestion.

Brain and meninges.—The latter contain more blood than usual; an abnormal amount of serum at the base.

Urine (drawn after death).—Sp. gr. 1,018. Albuminous and contains numerous coarsely and finely granular casts.

This case was chiefly interesting from a diagnostic point of view. The morbid lesions of typhus are, however, known to have no pathognomonic features. The autopsical revelations were, briefly, a general softening of internal organs, with an enlargement and softening of the spleen, an abnormal transudation of fluids into the tissues and cavities, a dark purple rupture that did not disappear at death, and the renal changes of chronic nephritis. As the coma and rapid rise of temperature, with the other phenomena, could not be explained by uræmia alone, a further cause was sought for and found most naturally in typhus fever, which alone was competent to explain all. Accordingly this conclusion was stated to be "possible, if not probable." On the day following the obscurity was removed from the history of the case by intelligence received from the Board of Health, that a patient of the same name had decamped from East Forty-seventh Street, and after much search had been traced to the Presbyterian Hospital. The origin of the disease then became clear.

Dr. J. C. Peters said that he was familiar with the situation and history of the houses from which the case came. He was of the opinion that none of the cases of typhus occurring in the years 1881–82, in New York, had been traced to importation. The houses in question were overcrowded tenement houses, near the northern boundary of the slaughter-house district, and in the neighborhood of garbage and filth dumps, and at the same time a sewer emptied a cove at the foot of Forty-sixth Street. Every possible effort was made to improve the hygienic condition of the locality, but unsuccessfully, until finally the proprietors of a large malt-house and a number of butchers were appealed to, and by their aid the nuisance was suppressed.

THE TÆNIA MEDIO-CANELLATA, OR BEEF TAPEWORM.

Dr. Carpenter also presented, on behalf of Dr. Satterthwaite, two varieties of tapeworm, which had some special points of interest. Of one, the head exhibited on a microscopic slide showed it to be the tænia medio-canellata. It had been derived from a patient in private practice. This worm is probably more frequently found in the human body than has heretofore been supposed. It is the adult form of the *unarmed tapeworm*, being distinguished from the common armed tapeworm, the tænia solium, in that it has no hooklets at all, but merely four large suckers. Unlike the tænia solium, also, it has no rostellum. The central sucker described by Leuckardt was not seen. It is also interesting from another point of view, being the beef tapeworm, its measle or larval form existing in horned cattle chiefly, whereas the measle of the tænia solium is found in the hog. In either case the system becomes in-

fected by eating meat that is either raw or has been insufficiently cooked.

A NEW VARIETY OF BOTHRIOCEPHALUS.

Specimens were then exhibited of an adult *bothriocephalus;* they had been taken from the intestinal canal of a large python that died in the Central Park menagerie. The animal had suffered from *gangræna oris* so commonly observed in this species of reptile, and its death was ascribed to the septicæmia which would naturally be the accompaniment to such a disease. This particular species of bothriocephalus had apparently not yet received a name, and accordingly it was intended to have it properly and fully described in the near future. Its peculiarity consisted mainly in the shape of the head, which was double, each division being marked by a central depression. It had neither hooks nor suckers and the segments were incompletely separated.

Dr. Carpenter also presented a fresh specimen of probable

MYXOFIBROMA OF THE NARES,

for which he was indebted to Dr. Wm. C. Jarvis, who removed the growth and furnished the following notes of the case: The patient, a gentleman twenty-seven years of age, was referred to him by Dr. L. Weber. Anterior rhinoscopy showed the nostril to be stenosed by gelatinous polypi. The posterior nares were found to be obstructed by a large irregular growth, the posterior margin of which rested upon the soft palate. The upper border encroached upon the vault of the pharynx, extending beyond the pharyngeal tonsil. The entrance to the left Eustachian tube was concealed by the lateral margin of the tumor, but the posterior outline of the right Eustachian eminence was visible. The growth, as reflected in the rhinoscopic mirror, was of a light pink hue. It had a cartilaginous feel and gave a harsh graty sensation when scraped with the finger-nail. The growth extended forward into the left anterior nares, where it could be distinctly seen and seized. Pressure upon the anterior prolongation of the polypus produced a corresponding disturbance of its posterior portion. Immediate removal was recommended, and the operation was performed by means of Jarvis's wire ecraseur. No anæsthetic was used. A piece of No. 5 piano wire was carried through the anterior nares, sheathed in the canula, and projected around the growth. More than *five hours* were occupied in making gradual traction, the instrument bending like a bow under the strain to which it was subjected, and pulsating like an artery. Just before complete excision was reached, the wire snapped with a distinct report, having been cut by the sharp edges of the steel point screwed to the ecraseur's canula. No hemorrhage occurred. An attempt was made to draw the excised portion from the slight remaining attachment to the mass, but as considerable force was required, it was thought best to desist, for fear of starting a hemorrhage, and the tissue was allowed to slough off. The patient returned June 28th, several days after the first sitting, the portion first excised having disappeared, when a large wire loop was carried into the mouth through the naso-pharynx, and made to encircle the base of the growth. Three hours and a half were occupied in making slow traction, at the end of which time the polypus was removed, one portion of which was mucoid in appearance and very vascular, being covered with large vessels, and the other very dense. The only pain complained of, and then only during the second operation, was a severe toothache. Not a drop of blood trickled from the nose into the pharynx. The large sphacelated spot upon the surface of the mass indicated where nearly one-half the growth sloughed off after the incomplete section at the first operation. The nose was also cleared of the gelatinous polypi. The division of the tumor through its densest portion without pain and hemorrhage demonstrated a safe and easy method for removing large nasal fibroid tumors piecemeal, without resorting to the more formidable surgical operations. The specimen was referred to the Committee on Microscopy.

Dr. Wm. H. Porter, in behalf of Dr. George F. Shrady, presented a specimen of

OSTEO-SARCOMA OF THE FEMUR—CIRCULAR AMPUTATION —PERIOSTEAL FLAP.

The patient was a man twenty-four years of age, and of strumous diathesis, who had enjoyed a fair degree of health up to two years ago, when he began to suffer from some difficulty affecting the left knee, which was diagnosticated as synovitis by his attending physician, and he was treated for that disease for eight months. During this time the joint gradually enlarged and assumed an irregular globular shape, the enlargement being most marked over the external condyle of the femur. One year after the onset of the knee trouble, he was seen by a prominent surgeon in the city in which he lived, who diagnosticated advanced cancer of the knee-joint, and advised against all operative interference. When Dr. Shrady first saw the patient, two months ago, the tumor presented the appearance of a central sarcoma originating in the epiphysis of the femur. At that time the tumor could be distinctly outlined, was irregular in shape, and yielded a crackling sensation, and indistinct fluctuation on palpation. The veins running over the surface of the tumor were markedly enlarged. Diagnosis of central osteo-sarcoma was made, and immediate amputation of the thigh advised. On account of an attack of scarlet fever the operation was delayed two months. In the meantime the growth increased in size somewhat, but its general features remained unchanged. Amputation was performed by Dr. Shrady by the circular method, June 20, 1882, and the loss of blood did not exceed four ounces. The periosteal flap was made, the end of the bone being thus completely covered. The stump was dressed by introducing a drainage-tube on each side and then covering the whole firmly with sheets of carbolized gauze, which, up to date, eight days after the operation, had not been removed, and at no time had there been any acceleration of pulse or rise of temperature. The general condition of the patient had improved, and there was good prospect of recovery.[1]

The specimen was a typical one of its kind, had its origin in the cancellous structure of the external condyle, and was almost completely surrounded by a bony shell.

OSTEOMA OF THE PENIS.

Dr. Wm. H. Porter then presented a specimen of bone which he had removed from the penis, with the following history:

[1] The dressings were removed on the ninth day, when it was found that union by first intention had taken place, except in the track of the drainage-tube. The latter was removed, when the remaining parts healed within a few days.

J. T——, aged sixty-three, about two and one-half years ago accidentally noticed a small lump on the dorsal surface of the organ and to the right. At first the only trouble which it gave was the mental annoyance. Later on it enlarged slowly, causing pain and a slight deflection of the penis when erect. The neoplasm enlarged very slowly, and caused a comparatively small amount of pain, but great mental uneasiness. The growth was irregular in shape, broadest at the junction of the middle and posterior thirds, pointed anteriorly, where it was united with the glands. It was freely movable under the skin.

Operation, July 15th.—A small opening was made directly over the tumor, and it was slipped out through a buttonhole opening. It was quite firmly attached to the fibrous tunic of the corpus cavernosa. The patient had done well, and was practically cured.

The mass, when freed from the adherent soft tissue, was found to be quite irregular in outline. It measured six centimetres in length and three centimetres at the widest point. It was slightly arched to fit the convexity of the penis.

Microscopic examination showed that it was a true bony mass, as it contained distinct lacunæ and canaliculi.

The case was certainly unique, if not the first of the kind recorded.

THE PRESIDENT had supposed that these growths were cartilaginous Some time ago a case came under his observation in which there was a distinct plate of resisting tissue about an inch and a half in length and half an inch wide, and situated apparently between the corpora cavernosa. He referred the patient to Dr. Keyes, who was unable to make any therapeutical suggestion.

DR. V. P. GIBNEY presented specimens with the following history:

OPENING OF SPINAL ABSCESS INTO A BRONCHUS—EXPECTORATION OF SEVEN PARTICLES OF BONE FROM CARIOUS VERTEBRÆ.

Many years ago, in the beginning of his service in the Hospital for the Ruptured and Crippled, he had a case of paraplegia from a high dorsal Potts, and the progress toward recovery, after so hopeless an outlook, made such an impression on his mind that he has always remembered, with much interest, Nellie L——, aged thirteen years, from an Eastern State, who was admitted to hospital, June 21, 1871, suffering from caries of the upper dorsal, the deformity of which was not great, but was seemingly of long standing. She seemed to have recovered from her caries, and within the preceding six months a relapse had come on, taking the form of a compression myelitis. For several months she had been growing weak in her limbs, and had been complaining of pains in her back. On admission, her gait was tottering, and her spine was tender. She was constipated, and had much difficulty in voiding her urine. A spinal support was applied and no notes of the reflexes recorded. On July 15th she was quite unable to stand, and during the following weeks she had great rachialgia, unrelieved by treatment. On July 30th paralysis in lower extremities was very nearly complete, and the feebleness of the grasp indicated a cervical paraparesis. In August she had retention of urine and catheterization was resorted to three times daily. She suffered much during that month from involuntary muscular spasms in inferior extremities. Blistering, followed by free poulticing, constituted a large part of the treatment. Her vesical paralysis did not continue longer than two or three weeks.

In May, 1872, she was walking by the aid of a chair. In December of same year she was walking alone, and by February, 1873, her restoration was complete. Shortly after this she was discharged cured. Four or five years later the report came to the hospital that she had died of consumption, and recently this report was contradicted. He wrote to her and received the following letter, which gives a very satisfactory history of the case to present date.

"DEAR DR. GIBNEY: . . . . First, I never have had any return of paralysis. My deformity has increased considerably; I have had two abscesses. A large swelling came on my right side, just inside my hip-bone, which was first called a rupture and then a fatty tumor, and in about a year and a half it came to a head and proved to be an abscess, and was lanced five years ago last September. A severe cold set in at the same time and the doctor thought I had quick consumption. I was very sick all winter, and the abscess discharged a great quantity of bloody matter. In the summer I got better, and was quite comfortable, until a year ago last winter, the left side of my back began to swell and my cough increased, and I raised great mouthfuls of bloody matter just as fast as I could spit it out. At this time, and within ten days, I raised seven little particles which my doctor thought were spinal bone. I have never raised any before or since. When my back was lanced, it discharged a great quantity of precisely the same looking matter as I had been raising, and my cough was relieved within ten minutes and I have never coughed as hard since. The first abscess healed about three months ago, and now seems perfectly sound. I think it will hardly be necessary for me to say that I am not in good sound health, as I have never been strong. . . . Will you please write again and let me know what you think of the particles of bone of which I spoke. Nearly every one laughed at the idea, and one of the doctors said, 'One could as well cough up their rubber boots as pieces of their backbone,' yet he did not try to explain what they were. I have lost two, one being the largest of all, but have five of them yet."

In response to a second letter she sent the five remaining particles, which are presented this evening. They are about the size of a pin's head and look exactly like the bits of *débris* resulting from a caries necrotica, such as one finds in old caseous sacs, and such as I have, on more than one occasion, seen discharged from the openings of psoas abscesses.

DR. W. H. PORTER, Chairman of the

COMMITTEE ON MICROSCOPY,

reported that the tumor of the stomach presented by Dr. Messenger was a *colloid cancer*.

The Society then went into executive session.

A PLAGUE OF MEASLES IN ICELAND.—Two winters of uncommon severity, followed by cold summers, have practically destroyed the hay and grain crops in the north and west of Iceland, causing a great loss of live stock and bringing the people face to face with actual starvation. A chilling visitation of Greenland drift ice has greatly injured all vegetation during the present summer, and to add to the general despair, a plague of measles of a malignant character has recently descended upon the famine-stricken region. An appeal for help is made to this country.

Correspondence.

LANGENBECK'S LAST CLINIC.

To the Editor of The Medical Record.

Sir: The formal leave-taking of Professor von Langenbeck, which occurred to-day, has excited great interest in all circles of society, both professional and laic, and has elicited a most hearty expression of the admiration and esteem which is here universally accorded to him. And, indeed, Berlin may well mourn the departure of this Nestor among surgeons, who has now passed thirty-four years of his brilliant professional life in her midst, and who departs now only when the inevitable ravages of time remind him that his race is well-nigh run, and cause his enfeebled body to crave repose and comparative seclusion from the turmoil and anxiety which pertain to his exalted position in this great city. No surgeon in all Germany has better fitted himself for lasting remembrance as one of the brightest lights in the surgical world of the nineteenth century; and no one, with the possible exception of Volkmann, in Halle, occupies so high a place in the esteem of his professional brethren.

This morning the clinical assistants of Professor von Langenbeck repaired to his residence, and there presented him with a costly flower and fruit stand of solid silver, which was embellished with the Langenbeck escutcheon, and those of the cities Kiel and Berlin; while on its top it bore a statuette of Æsculapius. In the afternoon the spacious and handsome amphitheatre in the University Clinical Hospital presented quite an unusual aspect. The operating-table, with its snow-white cover, which generally occupies the centre of the room, had disappeared; as had, too, the tables, with their wonted array of dressings, knives, saws, forceps, etc. In their stead were substituted flowers and garlands, while a whole forest of palms filled in the back-ground, and combined with the rich and heavy festoons of laurel, pendant from the central chandelier, to render the interior charmingly pretty and attractive. Another innovation was the presence of two plaster-of-Paris busts, one on either side of the proscenium arch; on the left, that of the first director of the surgical clinic, Karl Friedrich von Graefe, the father of the celebrated oculist, and on the right, the ivy-decked bust of the then-departing Privy Councillor von Langenbeck. Long before two o'clock, the hour for the clinic, the interior of the hall was crowded. Students and staff-physicians filled the rows of seats; while below, in the operating space, were assembled the most prominent members of the medical and surgical world of Berlin, conspicuous among whom were the officers and members of the Berlin Medical Society. Scarcely had the academical quarter of-an-hour elapsed when Dr. Langenbeck appeared, in company with his assistant-surgeons—all in their long white linen operating-coats, and was received with quite a stormy ovation. When he essayed, however, to proceed with the regular business of the hour, he was interrupted by Professor Bardeleben, who, acting in the capacity of spokesman for the delegation from the Berlin Medical Society, expressed, in eloquent language, the high appreciation in which von Langenbeck was held by them all, and their exceeding sorrow that he should feel called upon to retire from the active pursuit of his profession in their midst. After referring with regret to the fact that the non-completion of a marble bust of the retiring surgeon, which was being executed by Siemering, rendered necessary the temporary substitution of that in plaster, Bardeleben concluded with a heartfelt, "Gott segne Sie auf Ihren weiteren Lebenswegen!" Visibly struggling with the emotion which threatened to o'erpower him, Langenbeck thanked his colleagues and hearers for their thoughtful attention, and excused himself for not appearing in festive attire on that occasion. "But," said he, "I've celebrated so many festivities in this place, when by difficult operations I've restored the sick and suffering to health and happiness, that this unsightly operating-coat seems to me a most fitting garb." He then referred to the great progress which the science of surgery had made during the forty-two years of his clinical professorship, thirty-four of which had been passed in Berlin, and congratulated himself on the fact that so many of their graduates had taken a conspicuous part in furthering this progress by their labors and investigations—instancing particularly Albrecht, Wagner, Bock, Wilhelm Busch, and Karl Hueter, who had already gone to their reward. As for himself, he said that he had always followed the conservative line in surgery, not merely cutting and amputating, but striving to conserve diseased members to the greatest possible extent, and to restore them again to usefulness. And, though the cases which he was about to exhibit would apparently contradict this statement and make it savor of grim irony, yet the course pursued had in each instance been unavoidable.

Thereupon, at his beck three beds were rolled in successively, each of which held a poor unfortunate upon whom Von Langenbeck had performed a hip-joint amputation within the last few days.

While the dressings were being removed, he proceeded to explain the method of operating employed by him, and demonstrated its effectiveness by exhibiting the beautifully clean and rapidly healing stumps. In conclusion, he wished his colleagues and hearers a hearty farewell, and expressed a hope that they might still be called upon to materially advance the progress of surgical science, and to afford healing and succor to many sufferers.

Mr. Heilcke then addressed a few fitting words to the revered instructor in behalf of the students, and these finished, Dr. Langenbeck pressed the hands of his friends silently but with fervor, and took his leave. At 2.30 the clinic ended. It was the shortest which Langenbeck had ever held in Berlin—it was his last!

Born on November 19, 1819, Professor Von Langenbeck is now in his sixty-third year, and his determination to retire into comparative inactivity at Wiesbaden, where he owns an elegant villa, is doubtless to be attributed in part to the fact that he feels his infirmities growing upon him. His hand trembles so that his writing is well-nigh illegible, but while operating it is perfectly under his control, and he makes his incisions with great nicety. In amputating at the hip-joint he first ligates the femoral artery high up. Then, without transfixing, but using his comparatively short "lappen-messer," he raises an anterior flap, which includes but little muscular tissue, and that only toward the completion of the section.

After securing all bleeding vessels, he next proceeds to merely outline the posterior flap. This done, he returns to the anterior incision, rapidly deepens this till the joint is reached, disarticulates

and completes the formation of the posterior flap. Two drainage-tubes are used—one in the retiring angle of the wound, which discharges at its inner extremity, while the other passes through the posterior flap and into the acetabulum.

The sutures now being inserted, the wound is dressed à la Lister, except that carbolized charpie, thickly dusted with iodoform, is substituted for the "protective." The wound is redressed after the lapse of twenty-four hours. This iodoform dressing is well-nigh universally employed by Von Langenbeck. Indeed, I remember no operation in which it was not used, either in the manner stated or, as in open resection wounds, directly applied to the raw surfaces. Still, I was informed by one of the clinical assistants that toxic effects are rarely met with, and then only in the event of large wounds being regularly dressed with the agent for long periods of time.

Von Langenbeck's successor, Professor Bergmann, of Würzburg, is a middle-aged man of forty-five (he was born December 14, 1836), and is the son-in-law of the well-known Russian State Councillor, Dr. Adelmann, of St. Petersburg. Only a few weeks since he was distinguished by the appointment as surgeon-general à la suite, in the German army, and, together with Gerhard and Kölliker, forms the principal attraction of the Würzburg medical faculty. After the completion of his medical studies, he connected himself with the Russo-Prussian university at Dorpat, where he was at first adjunct, and later regular professor of surgery.

In the surgical world Von Bergmann has become known through his exact and interesting studies of the septic properties of wound-secretions, and his experimental investigations into the pressure-symptoms sequent upon injuries of the cranium. Further, he has published studies on different operative procedures and their technical improvement—the result, in part, of his experience on the field during the Franco-German war. In his practice he is a firm advocate of Listerism. In the year 1871 he received a call to Königsberg as regular professor of surgery, and was preparing to accept the position when Dr. Schönborn was elected in his stead.

But in 1875, on the death of Professor Von Linhart, of Würzburg, Von Bergmann was appointed as his successor, and since that time he has occupied the chair of surgery, and has been director of the surgical division of the old and famous Julius Hospital in that town.

S. Y. Howell, M.A., M.D.

Berlin, July 21, 1882.

RETRO-PHARYNGEAL ABSCESS.

To the Editor of The Medical Record.

Sir: At the stated meeting of the New York Surgical Society, May 9, 1882, Dr. H. B. Sands gave an interesting account of a case of retro-pharyngeal abscess to which he had been called in consultation. From reading the published report of it in The Medical Record of July 22d I was clearly reminded of a case which occurred in my own practice in the winter of 1877–8, and which bore to it one or two striking points of similarity, while it differed from it very materially in others.

The patient was an illegitimate negro child, male, fairly nourished, about three months old, whose parents, as far as could be learned, were physically sound and free from syphilitic and scrofulous taint.

In the course of the first month or six weeks of its existence I had treated it successfully for *pemphigus*, in which the vesicles were chiefly confined to the dorsal surfaces of the hands and feet.

For several weeks thereafter the child was destined only to cope with the ordinary vicissitudes of infancy, besides being unusually neglected, when, succeeding a short premonitory period, a swelling developed in the neck on the left side, which after suitable time yielded distinct fluctuation, was promptly incised and evacuated of about half an ounce, or more, of muddy-looking pus.

Three days subsequently the incision had practically healed, the parts had reassumed their normal appearance, the child nursed well, and in all other respects seemed to have regained quite a satisfactory state of health.

In the morning, however, of the fourth day, or thereabouts, he was found to be feverish, fretful, and devoid of appetite. Investigation elicited the fact that the swelling in the neck was returning, and that the parts involved were sensitive to touch and painful on making the slightest movement of the head. As the readiest means at hand, fomentations and bread and milk poultices were ordered to be applied, and small doses of quinine administered at proper intervals.

The following night, when I saw him again, the constitutional disturbance had increased, and there was also some dyspnœa and difficult deglutition, accompanied by retraction of the head. He had refused all nourishment, and had been very restless and irritable throughout the livelong day.

I was able to make only an imperfect examination of the interior of the pharynx, but it was sufficient to convince me of a certain amount of tumefaction present in the left wall and median line, projecting somewhat into the cavity. Externally the intumescence was more prominent beneath and behind the sterno-mastoid muscle, and occupied the identical site of the former abscess, but extended to greater limits in every direction. The integument covering it was tense and shining, and obscure fluctuation was thought to be limited to a narrowly circumscribed area in the occipital division of the posterior triangular space.

Taking note of the child's unfavorable surroundings, and appreciating the danger that might accrue either from the burrowing action of an abscess beneath the deep cervical fascia, or from its sudden eruption into the pharynx, I at once determined to operate.

A bistoury was passed into the swelling from without and made to penetrate the deep fascia, but with just the effect of producing a current of dark-colored blood. Whereupon a grooved director was introduced with a slight forward inclination and forced to a depth of at least two and three-fourths inches. The merest trace of pus-streaked blood followed this manœuvre, and although a pair of dressing forceps was afterward thrust in and withdrawn with blades open (Hilton's method) no further evidence of pus ensued. Altogether, not more than two and one-half ounces of dark, quickly coagulable venous blood were lost when the hemorrhage ceased spontaneously, and the child's condition forthwith became perceptibly improved. Both the bowels and bladder relaxed, and gave copious emission of their contents; his struggles ended and his cries became silenced.

Pads were arranged as securely as possible on either side of the incision, and a simple dressing of

carbolized oil used. He was then put to the breast and proceeded to nurse greedily.

The next morning I was considerably surprised, as well as relieved, to find that all systemic disorder had apparently subsided, and that not the remotest indication of tumefaction, either externally or internally, remained. The wound itself, upon removing the dressings, was seen to have become intimately united by primary adhesion, and would easily have escaped any cursory inspection.

He continued under observation eight or nine months longer, and, despite his unpropitious situation, sustained an excellent standard of bodily welfare for the whole of that time.

I have never satisfactorily determined in my mind the true character of the affection. It was not entirely impossible that it might have been a remarkable manifestation of latent scrofula. But remembering all the circumstances attendant upon its inception and dispersion, besides considering among other things the great infrequency with which symptoms of the scrofulous diathesis are, to say the least, so conspicuously exhibited in a subject so young, the most natural conclusion is that such in reality was not the case. On the other hand, if it were simply a purulent collection, as supposed, where was the pus in sufficient quantity, or what became of it so mysteriously and with such wholesome effect? The probability of its having been due to blood extravasation, serous infiltration, or even to a cystic growth, is contrary to the history given, and was not supported by the symptomatic indications nor by the results of the treatment pursued.

Finally, it was certainly not emphysematous in nature, although from the peculiar mode of its disappearance, it apparently "melted into air; into thin air."

LACHLAN TYLER, M.D.

WASHINGTON, D. C.

THE DANGER OF ADMINISTERING AN ANÆSTHETIC DURING OR IMMEDIATELY AFTER REPEATED DOSES OF MORPHIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I am inclined to think that Dr. John A. McKennon has not drawn quite correct conclusions from the treatment of his case of nephritic colic, mentioned in THE MEDICAL RECORD of July 29th, page 140. It is my opinion that the well-nigh fatal result was not entirely due, as he thought, to the increased effect of the morphia, which followed the supposed dislodgment of the calculus, and the sudden relief of pain; but that it was in consequence of the *inhalation of chloroform* while giving the morphia.

Let me relate a case to the point. I once had under my care a woman who suffered from severe uterine colic, not associated with menstruation or pregnancy. On the occasion referred to, she had taken twenty minims of tr. opii an hour previous to my arrival. As her suffering was still intense, I at once gave ¼ gr. morphia sulph. hypodermically. Waiting a half hour and astonished that the pain did not abate in the least, I repeated the injection, giving ¼ grain. Still there was no relief. A hot sitz bath was likewise fruitless. I waited an hour, and as her agony seemed almost intolerable, I administered hypodermically ½ grain fresh solution of morphia sulph. A half hour passed, and she still suffered as keenly as before. She received another ½ grain hypodermically, but without effect.

Within three hours she had received the equivalent of nearly two grains of morphia, so that I determined to abandon its use. The only resort I could think of to bring the prompt relief that was so urgently demanded was to suspend consciousness. Some of Squibb's ether was near, about two drachms of which I poured upon a small towel, and held to her nose.

It was not more than a minute when she ceased moaning. I at once removed the towel. In another minute she gave the same evidence of suffering, when I replaced the towel, having added about one drachm of the ether. Watching her very closely, with my finger on her pulse, I soon observed a change in her expression which led me to gently shake and speak to her. She did not respond.

Instantly, an ashy pallor overspread her face and respiration ceased. Her peril was imminent and obvious.

By the most vigorous slapping, thumping, and dashing of cold water in her face, I elicited a feeble response, which was finally fanned into consciousness.

In two hours she was out of danger, and I was intensely relieved. Two hypodermic injections of atropia sulph.—the first $\frac{1}{80}$ of a grain, given as early as possible, and the second soon after, $\frac{1}{60}$ of a grain—rendered invaluable service.

Even after such profound narcosis, the uterine neuralgia persisted, though not quite so severe, and was finally relieved by chloral hyd. and potassium bromide.

This taught me a lesson which I shall never forget, and I believe the same lesson is to be learned from Dr. McKennon's case.

In either case, without the use of the anæsthetics, I do not believe toxic symptoms would have supervened.

The explanation I would venture is, either that the anæsthetic renders the system greatly susceptible to the action of the morphia; or else, that the suspension of consciousness at once deprives the patient of that force which we know to be potent in resisting toxic or other depressing influences.

Be the explanation what it may, the effects are the same.

It would be interesting to have the experience of others with this narco-anæsthetic combination.

S. H., M.D.

PENNSYLVANIA.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 20, 1882, to August 26, 1882.

MURRAY, ROBERT, Colonel and Surgeon. Relieved from duty as Medical Director Military Division of the Missouri, and to report in person to the Commanding General Military Division of the Atlantic and Department of the East for duty as Medical Director of that division and department. S. O., 191, A. G. O., August 18, 1882.

BILL, J. H., Major and Surgeon. Granted leave of absence until December 1, 1882. S. O. 196, A. G. O., August 24, 1882.

ALDEN, C. H., Major and Surgeon. Granted leave of absence for three months. S. O. 196, C. S., A. G. O.

MUNN, C. E., Captain and Assistant Surgeon. The leave of absence granted him in S. O. 147, Department of Missouri, July 28, 1882, extended two months. S. O. 196, C. S., A. G. O.

SPENCER, WM. G., Captain and Assistant Surgeon. The leave of absence granted him in S. O. 80, April 7, 1882, from A. G. O., is extended two months. S. O. 191, C. S., A. G. O.

OWEN, JR., WM. O., 1st Lieutenant and Assistant Surgeon. Assigned to temporary duty at Vancouver Barracks, W. T. S. O. 114, Department of the Columbia, August 11, 1882.

MACAULEY, C. N. B., 1st Lieutenant and Assistant Surgeon. To report in person to the Commanding General Department of the East, for assignment to temporary duty. S. O. 192, A. G. O., August 19, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 26, 1882

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
August 19, 1882.	0	33	28	5	9	29	0	0
August 26, 1882.	1	29	29	5	9	45	0	0

MR. STOKES' ADDRESS.—In Mr. Stokes' address (p. 245), it is stated that a mortality of only 3 in 600 cases occurred. It should read three per cent. or strictly 3.6 per cent. On page 247, instead of Dr. Ashley, read Dr. Ashby.

NATIONAL BOARD OF HEALTH.—At its meeting, August 15th, Dr. Chas. Smart was elected secretary, in place of Dr. Turner resigned.

DR. AUSTIN FLINT will deliver the Philadelphia County Medical Society's lectures during the coming winter.

A NEW MEDICAL COLLEGE in London, Canada, has just been organized. London is a city of about 20,000 inhabitants, and now expects to have a hospital.

A BUST OF THE LATE PROFESSOR JOSEPH PANCOAST has been made, and will be presented to the Jefferson Medical Society.

THE LOWELL LECTURES.—Dr. W. B. Carpenter is to deliver the next Lowell lectures in Boston.

PRELIMINARY EXAMINATIONS FOR THE UNIVERSITY OF PENNSYLVANIA.—In order to facilitate the admission of students and to aid the upward tendency of medical education, the authorities of the University of Pennsylvania have appointed physicians, graduates of that school, in the different prominent cities of the Union, remote from Philadelphia, whose duty it shall be to examine candidates for admission into the Medical Department. The result of the examination is forwarded to the authorities of the University, who, in turn, notify the candidate of his success or failure. By this means the applicant is spared the expenditure of time and money necessary to a trip to Philadelphia on an uncertainty.

TWO NEW CASES OF RESECTION OF THE PYLORUS have recently been operated upon; the one by Gussenbauer, of Prague, the other by Bamberg.

THE PRIZES OF THE ACADEMY OF MEDICINE, of Paris, were bestowed at the annual meeting, August 1, 1882. Of the thirteen prizes offered only eleven were awarded. Among these, and of most interest to Americans, was the Prix d'Argenteuil of 10,000 francs, of which 6,000 francs were awarded to Dr. Henry J. Bigelow of Boston, author of a work entitled "The Cure and Prophylaxis of Strictures of the Urethra by '*Dilatation Urodyname;*'" 4,000 francs to Dr. The. Anger, of Paris, author of an essay describing a new thermo-cautery, and of an essay upon peno-scrotal hypospadias. We congratulate Dr. Bigelow upon thus atoning for the slipping away of the Boylston Prize.

Among other prizes awarded was the Prix Barbier, 6,000 francs, to Professor Toussaint, for his experimental studies in charbon, cholera of fowls, etc.

For the year 1883 the Academy offers seventeen prizes, the total amount of money being over 60,000 francs. The largest prize, that of M. and Mme. St. Paul, and amounting to 25,000 francs, will be given to any one who, in the judgment of the Academy, has found a remedy against diphtheria.

A SCIENTIFIC TUG.—The good ship Henrietta sailed into Galveston, Texas, in the first part of August, having on board several cases of reputed yellow fever. She was quarantined and a tug ordered by the city authorities to take her to Ship Island.

Her voyage should be a memorable one in sanitary annals, for it showed how quickly the untutored mind of the seaman seizes upon and applies the most recondite speculations of pathology. A despatch says: "One of the singular things connected with the affair was the mention of the alleged fact, based on the discovery of the late Dr. Chopin, that the yellow-fever germ travels forty feet a day. So, to make sure of saving the steam-tug from contagion on the way to Ship Island, a six hundred-foot hawser was purchased and used on the trip. The trip only occupied three days, so, of course, only one hundred and twenty feet of the hawser was infected and required to be burned."

THE AMERICAN ASSOCIATION OF SCIENCE held its annual meeting this year at Montreal, August 23d, 24th, and 25th, over six hundred members being present. The only papers which we find reported of medical interest were one by Dr. Warder on "Contamination of Wells," and a description by Professor Bell of his instrument for locating bullets in the human body.

DR. J. MARION SIMS, who was made a Chevalier of the Legion of Honor in 1864, as a reward for scientific merit, has, by decree of July 13th last, been made Officer of the Legion of Honor for services rendered as surgeon-in-chief of the Anglo-American Ambulance at the battle of Sedan.

A GERMAN SURGEON'S OPINION.—Professor Esmarch is reported as declaring that the surgical treatment of the late President Garfield was wrong, and that his life might have been saved by proper medical care. Esmarch lives a long way off, and speaks at a very late hour. It is easy to make mis-

takes under such conditions. He had better have held his peace. There are many American surgeons who know more than Professor Esmarch and think very differently from him.

Medical Registration in Pennsylvania is evidently well received. Of the 6,942 doctors in that State all but about 500 have registered.

Professor Esmarch's Work, "First Help to the Injured," has been translated into English by the Princess Helen of Great Britain. Professor Esmarch has aroused much discussion by his zealous encouragement of Samaritan Societies, which are organizations among the laity for the purpose of learning and teaching the way to meet medical and surgical emergencies. It is thought that a little knowledge is a dangerous thing, and that people will be encouraged by these societies to meddle more than they will be taught to help. Esmarch has finally written a letter to the *Allgemeine Medicinische Central-Zeitung* defending his views.

Progress of the Yellow Fever Epidemic.—Since our last note a complete sanitary cordon has been established from Laredo to Corpus Christi, by which the fever will probably be kept within the triangle of which these places and Brownsville form the angles. Fifty or sixty cases of yellow fever per day have been announced as occurring at Brownsville.

On August 28th a case of yellow fever was brought to Pensacola, Fla., on the bark Penang, from New Orleans.

Alleged Horrors of a Utah Insane Asylum.—Hon. G. A. Tucker, an English gentleman from New South Wales, accompanied by the United States Marshal Ireland and Mr. Neal, of Louisville, Ky., visited the Utah asylum recently, which is under the charge of Dr. Seymour B. Young, a nephew of Brigham Young, and three Mormon Commissioners. Mr. Tucker says he found twenty-one patients, nine females and twelve males, in the most filthy condition imaginable. Some were in iron cages outside the main building, while others were in irons, bound hand and foot.

A Case of Typhus Fever discovered in this city during the last part of August was found to have been imported from Cornwall by the patient, an Italian railroad laborer. Incidentally it is stated that this class of laborers is the frequent source of typhus and small-pox.

Texas Fever at Auburn, N. Y.—The Texas fever has atacked the cattle at several slaughter-houses on the outskirts of Auburn, and all beef is sold under certificates of the Board of Health. Street peddling of meat in the city has been stopped for six weeks, and it is probable that all the infected fields will be quarantined until the cold weather. The disease originated in some Texas cattle pastured in the suburbs.

Curious Medical Scraps.—Dr. John C. Peters, of New York, sends us the following curious scraps:

1. Albert Dürer, the great artist, had to endure great griefs, on account of the temper and conduct of his wife Agnes, till he could bear it no longer, and at last was borne down and sunk under them. She now silently did everything to please and comfort him and recompense him for many long years of sorrow, and finally told him in broken sentences that she had, when a little girl, been playing one day in the garden with her little brother Johannes, who had put a small polished stone in his mouth, but finding afterward a beautiful bird's-nest, and holding in his breath for joy, he choked with the stone. His face became red, he sunk down, kicked with his feet, and stared at her with glazed eyes. Agnes ran away in childish fear, and hid herself, without raising any alarm, but her father, on coming home late, and missing the children, went to seek for them, and found Johannes dead in the garden. When they were carrying away little Johannes, Agnes looked sorrowfully from a window in the upper story of the house, and leaning over too far, fell out, striking her head upon the pavement, and now made Albert feel the hollow in her head, which was even perceptible to the eye from a slight depression of the hair. She then began also greatly to complain that she did not hear well when the wind blew from the east. It then came to light by degrees that the wind seemed to her during many fine days and seasons, very often to blow from the east. This was probably a case of pachymeningitis traumatica.

2. The immortal Harvey was a great martyr to the gout, and his method of treating himself was to sit with his legs bare, even if it was frosty weather, on the leads of Cockaine House, where he lived, or to put them in a pail of water till he was almost dead with cold, and then would betake himself to his fire and warm himself. He was also troubled with insomnolency, when he would get up and walk about his chamber in his night-shirt till he was pretty cool, or even until he began to shiver, when he would return to his bed and fall asleep. Finally, on June 3, 1657, he was seized with paralysis, and, as his biographer expresses it, with a dead palsy in his tongue, so that he could not speak. But his intelligence was good, for he distributed presents to his nephews and friends to remember him by. To one he gave the watch which he had used in making his experiments, and to another a different token or gift, and so on, always making signs to one or the other, for he could not speak. This was undoubtedly a case of asphasia.

3. The great Caius, or Kay, or Key, or Dr. John Keyes, died in his sixty-third year, of cancer of the stomach, and before his death was reduced to a state of great bodily weakness, which he attempted to obviate by the use of breast-milk, with funny effects, according to Dr. Mouffet, "for he was peevish and full of frets when he sucked one woman, who was froward of conditions and of bad diet, and contrariwise was amiable, quiet, and well when he nursed from a good and pleasant woman."

4. Linacre died in great agony from the stone, October 20, 1524. He was in the habit of relieving himself with chamomile flowers and parsley roots tied up in a cloth and boiled in water until one-half of the fluid was evaporated. Then the cloth was wrung out and applied hot to the bladder and kidneys, and he drank the warm herb-liquid. In one violent attack the application of the remedy brought away a stone as big as an almond. It is very probable that Bigelow or Keyes would have cured both Linacre and Sydenham, who both died of stone in the blood.

5. Sydenham contended with the gout from the early age of twenty-five, and in his thirty-sixth year was confined to bed with a very violent attack for months, and in 1676 he began to have stone and gravel, of which he died in 1689, aged sixty-five years. When he began to take care of himself and be attentive to his diet, he drank a dish or two of tea early in the morning, and drove to his patients in

his coach till noon, when he returned home and moderately refreshed himself with any sort of meat easy of digestion, and drank somewhat more than one-fourth of a pint of Canary wine, to promote the digestion of food in his stomach, and to drive the gout from his bowels. When he had dined he betook himself to his coach again, and visited his patients, although the symptoms of stone recurred whenever he drove over paved streets, though the horses went very gently; and once having walked much he suffered a very severe paroxysm. A draught of small beer served him for a supper, and he took another draught when he was in bed and about to compose himself to sleep.

THE TOY PISTOL.—A subscriber writes: "Will you or one of your numerous contributors furnish answers to the subjoined questions concerning the now celebrated toy pistol? What is the construction of the toy pistol? How many kinds are found in the market? Which kind is the most harmful? Why is it that so many cases of tetanus are reported in connection with its use? What is the exciting cause of the tetanus? Is the efficient cause chemical or mechanical?"

AN OBSTINATE MALINGERER.—Dr. Thomas F. Houston, of Clarkesville, Ga., sends us the history of a curious case of malingering ending in a very serious surgical operation.

The patient was a colored man accused of stealing a watch. Although he had always appeared perfectly sane, when the day for trial came he was found naked in his cell, refusing to speak, and showing a tendency to fight. Dr. Houston being summoned, pronounced him sane and he was forcibly dressed and carried to court.

During the trial he lay like a dead man on the floor, and in such a condition was carried back to jail. He was tried, found guilty, and sentenced to a year's imprisonment. When he reached the jail after his sentence, he jumped up, struck his heels together, and remarked: "Well, I am guilty, but I would have fooled the law but for that d——— doctor." In one hour he had torn off his clothes and thrown them out of the window, and was acting in the same manner again. "On December 1st," writes Dr. H., "I was requested to see him and decide if he could be removed to the penitentiary. I again examined him, having learned that since the day after the trial he had not spoken or gotten out of his bed, which emitted an intolerable odor from the excretions he had voided in it.

"*Examination.*—Pupils normal, pulse 108, full and hard. Percussion and auscultation found no abnormality. No perceptible tenderness in any portion of the body. Muscles responded normally to electricity. Tongue clean. Found four large blisters, two on each ankle, about 2 inches in diameter, and about 1½ inch high, occupying the site of some old shackle-marks that he had worn during some former service in the penitentiary. The blisters were evidently the effects of two cold nights which had occurred during the time that he was attempting to play the madman, when the thermometer went to about 13° F. The blisters were filled with a dark yellow serum. Such was the rascal's fortitude that the strongest current of a No. 4 galvano-faradic battery would not elicit a wince other than the natural muscular contraction. As the convict had always borne a reputation for intelligence and desperate recklessness, rarely equalled even by his race, I again decided that it was 'pure cussedness,' as they say in the Southwest. But the prison authorities could not induce him by threats or persuasion to show the slightest sign of human intelligence, so they had to let him lie in his filth.

"On the following day the ordinary had him removed to the dwelling of another negro, and left him in his charge. Some days after the negro nurse came to my drug store and bought a bottle of 'Darby's Prophylactic Fluid,' to use in bathing his ankles, stating that they were getting in a bad condition.

"On December 8th I was summoned to see him. On entering the room I remarked to a medical student who accompanied me, 'I smell gangrene.' Upon uncovering his feet a most horrible sight greeted my eyes. He was suffering from gangrene of both extremities, the skin had slipped off like a sock. The toes were wanting, the lower row of metatarsal bones protruded through the flesh fully one-half inch, and in several other places the flesh had fallen off, revealing the tarsal bones. The diseased action extended back as far as the malleoli. Temperature, 103° F.; respiration, 26; pulse, 120, feeling like a cord under the finger. Prescribed elix. beef, iron and wine, egg-nog, and Valentine's meat juice, and a saline antimonial mixture, tablespoonful the first hour, one teaspoonful each subsequent hour until the temperature falls to 99° F., the dose to be increased p. r. n.; the feet to be bathed every hour with a solution of chloride of lime. Gave calomel, grs. v. A line of demarcation finally formed, both legs were amputated, and the patient recovered. He afterward expressed his gratitude for my attention, and admitted that he had been malingering."

NATIONAL MEDICAL EXAMINATIONS.—A surgeon of the Navy sends us the following: "In your issue of March 4, 1882, are seen some remarks upon 'A National Examining Board,' by Navis. These remarks would appear to have been original with the author, while in reality they are merely reflections of previous articles coolly appropriated by Navis. In the *Boston Medical and Surgical Journal* of November 3, 1881, may be seen a very interesting paper by Dr. W. B. Platt, of Baltimore, entitled 'A Plea for United States Medical Examinations,' and in the same journal of December 29, 1881, appears a plan for 'National Medical Examinations,' by Hesperus. Besides the above-mentioned papers, numerous medical periodicals have, from time to time, advocated various plans for the organization of post-graduate examining boards. So the idea, though an excellent one, and worthy of the warmest support, is far from being recent. This scheme of forming general examining boards from the army and navy is the only one that promises the least hope of success, and should it ever bear fruit the originators should receive the country's gratitude."

IPECACUANHA AN OXYTOCIC.—Dr. J. W. Wadsworth, of Saltillo, Mexico, writes: "In THE MEDICAL RECORD of June 3, 1882, appeared an article 'On the Use of Ipecacuanha during Labor,' by Dr. Pitkin, of Newark, N. J., in which the writer calls for the experience of other physicians in its use. In the *New York Medical Journal* for November, 1878, Dr. Pitkin will find a very interesting, original communication from the pen of Dr. Carriger, of Knoxville, Tenn., entitled 'The Use of Ipecacuanha in Labor.' My own experience of its use in labor dates from the publication of that article and prompts me to bear testimony to the truth of

the statement of Dr. Carriger that ipecacuanha 'is both a potent and reliable *uterine motor stimulant*, capable of meeting important indications, in certain cases, much better than any other agent yet brought to our knowledge.' In this country ignorant *parteras* (midwives) mismanage nearly all the labor cases among the middling and poorer classes, after the Chinese plan, the woman kneeling and pulling on ropes attached to a transverse pole, straining until nature exhausts herself, and as a consequence we have many cases of powerless labor, and of retained placenta. Then the physician is sent for, but thanks to Dr. Carriger's observations, these cases do not now annoy me, nor is valuable time lost when two grains of ipecac, taken half hourly, relax the rigid os and bring about a tonic contraction of the uterus far different in its action from that of ergot. I regret having lost my notes taken for the first two years after commencing the use of ipecac in labor, but, nevertheless, constant experience with it has taught me to believe that it not only relaxes the rigid os, but co-ordinating uterine action, actually increases the muscular power of the uterus, proving itself by its physiological action a *true oxytocic*."

A Directory for Nurses has been organized in Philadelphia in connection with the College of Physicians and Surgeons.

Interesting Facts Concerning a Case of Sunstroke.—J. Cresap McCoy, M.D., of Kirwood, Del., communicates the following case:

"On Thursday, June 23d, I was called to see W. R——, colored, aged twenty-three, who, on being questioned, stated that on the day previous he had fallen and injured himself in the left inguinal region. On examination I found a fluctuating tumor three inches in length, quite superficial, and running parallel to Poupart's ligament. By the aid of an exploring needle I found the contents of this tumor to be pus, and a free incision was made to evacuate it. The cavity was washed out with a solution of carbolic acid, one in twenty, and the wound dressed with balsam of peru. A tent made of oakum was left in the wound.

"Nothing unusual happened to the patient that day, he went to work as usual and returned home at night feeling all right. When he arose the next morning he noticed that his head ached a little, and that his *urine, as it passed, caused smarting*. He started for my office, to consult me regarding his condition, about 10 A.M., the morning being an exceedingly warm one. He proceeded about one mile when he grew weak and fell fainting by the roadside. On being conveyed to his home he regained consciousness, and complained of intense headache, and pain in *lumbar region*. When he endeavored to pass water he again noticed smarting, and also that one-half of the volume which he *passed was blood*.

"All his symptoms continued to grow worse, until finally he became delirious, and I was hastily summoned. I found him wildly delirious, eyes bloodshot; temperature (rectal), 106½° F.; pulse, 150; respiration, 40 per minute.

"With the foregoing history, which I obtained from his wife, and with the knowledge of the abscess, I was in a quandary as to whether the case was one of *sunstroke* or *pyæmic abscess of the kidney*. However, from the urgency of the symptoms, something had to be done at once, and reduction of temperature being indicated, I stripped him, threw a thin sheet over his body, and then over this sprayed him by means of a fountain syringe for about two hours, using *tepid* water. I also placed ice bags to his head. In a few minutes from the time that I began the spraying he recovered his consciousness; the temperature (rectal) fell to 104½°, and all his other symptoms abated.

"By the end of the two hours I succeeded in bringing his temperature down to 101°, and the man fell asleep. I left him at this period, but was again summoned during the afternoon, when I found him suffering with a relapse of all his former symptoms, which, however, were not quite as severe as in the first instance.

"I once more applied the ice-bags and used the tepid water spray for about one and one-quarter hour, and he recovered as before, complaining, however, of great pain in back, and inability to pass water. I introduced a catheter and drew off about 6 ʒ of thick, cloudy urine, deeply tinged with blood.

"From this time the patient went on and made a good recovery. He has had no bad symptoms, and feels well generally with the exception of slight smarting accompanying micturition. There was no blood found in urine two days from the time of the attack.

"I think, from the history and course of the case, that there was no doubt but that the diagnosis of sunstroke was the correct one, and the facts which interested me in the case were, the *intense pain felt in the back, and the condition of the urine*.

"I examined the urine by the aid of the microscope, and found blood-corpuscles and large quantities of the urates and uric acid crystals. The deductions which I draw from the case are: 1. That there was of necessity intense engorgement of all the internal organs, and more especially of the liver and kidneys. 2. That this engorgement interfered with the action of the liver and prevented it from acting upon the albuminoids of the portal circulation. 3. The result of this was the formation of urates and uric acid in excess, which passed on to the kidneys for separation from the blood. Here they met with organs similarly congested, and the excess of these salts being so great, they acted as mechanical irritants, and so produced the hemorrhage. The smarting produced by the passage of the urine is explained when the constituents of the urine are taken into consideration."

Nearly a Century and a Half.—The *União Medica*, of Rio de Janeiro, has the following: "In Piedade, District of Votuverava, Francisco Bueno da Rocha lives. He is one hundred and thirty-three years of age and in perfect health. A grandchild of one of his grandchildren is a marriageable woman."

Dr. B. W. Richardson, nothing daunted by the work of resisting the drunkenness of the age, has just been presiding at Exeter Hall, over the foundation of a Society for the Suppression of Juvenile Smoking.

A Quack Doctor, on his death-bed, willed his property to a lunatic asylum, giving as a reason for so doing that he wished his fortune to go to the liberal class who had patronized him.

Internal Administration of Chrysophanic Acid.—The external use of chrysophanic acid is now well known. Its internal use is, however, a novelty, but one which appears to promise good results. At the meeting of the Glasgow Medico-Chirurgical Society on April 7th, Dr. Napier showed two cases of psoriasis which had been treated by the internal ad-

ministration of chrysophanic acid. The initial dose was one-eighth of a grain of the acid rubbed up with sugar of milk, and was gradually increased. The result in both cases was very good, and he believed that this was the first time that this acid had been used in this way. The advantage of this method was, that the remedy might be employed internally where it was too irritating to be applied externally.

BLUE MILK.—The blue appearance which milk sometimes presents after standing a few days is due to an organism which is allied to bacteria, and can be transplanted into other samples of milk and various solutions. It thrives according to the proportion of acid present and the condition of the casein; it appears after a certain degree of acidification has taken place, and prevents the further formation of acid. The casein must also be unchanged; it is then held in solution during the bluing process. The bluing occurs only in presence of oxygen, and is attended with evolution of carbonic acid.

POPLITEAL ANEURISM.—According to *El Progreso* of Cárdenas, Dr. Sims has cured a popliteal aneurism by electro-puncture after three sittings, using the galvano-electric battery of Beltrau.

VOMITING OF URINE.—Generali and Tonini report the case of a patient whom they presented at the Ninth Medical Congress at Genoa. She was thirty-three years of age, and gave a syphilitic history. In October, 1879, she was seized with weakness, headache, epistaxis, and insomnia. The abdomen was retracted. Patient took a light purgative. On November 2d, she was taken with a severe chill, which obliged her to seek her bed. On the following day she was found lying on her back, with pinched features, pulse of 100°, temperature of 33.8° in the axilla. She was suffering from ringing in the ears, severe thirst, and answered questions with difficulty. The tongue was whitish in the centre, and reddish along the edges. Physical examination of the thorax, liver, and spleen revealed nothing. The abdomen was retracted, painful, and sensitive to pressure in the iliac region. The phosphates of the urine were diminished. Inguinal and cervical glands were enlarged. At night the temperature was 39°, pulse 120, and next morning 39.3° and 115 respectively. For three or four days, the temperature varied between 39° and 40°. On the eighth, it rose to 44.4°, while the pulse attained 135. Adynamia was pronounced, the abdomen tympanitic, evacuations frequent, abundant, and fetid. After a temporary amelioration of the symptoms, the patient was again, on the twentieth day, seized with a chill, followed by a febrile movement with a rise of 40°. Acute pain, increased on respiration, was present. The existence of a double pneumonia was diagnosticated. After recovery from this, she was attacked with peritonitis, which left an effusion in the peritoneal cavity, amenable to diuretics. On December 28th, the quantity of urine rapidly diminished to five hundred grammes, and subsequently no urine at all was voided. The patient began to vomit a liquid which presented all the characteristics of urine, containing urea, phosphates, chlorides, alkaline, and earthy sulphates, phosphate and carbonate of magnesia, and pigmentary matter. The microscope revealed gastric and œsophageal epithelium, mucous corpuscles, and the handsome typical crystals of uric acid, resulting from the decomposition of the urate of sodium by the gastric acids. During this vomiting of urine not a drop could be obtained from the bladder. At the end of a month the patient was entirely well. No explanation of the phenomenon is given.—*Cronica Med.-Quir.*

TEETOTALISM A SCIENTIFIC IMPOSSIBILITY.—A correspondent of the *Lancet* writes: "How will the teetotalers reconcile their pledge with the following discovery? M. Muntz, director of the laboratory of the Institut Agronomique, has, by means of an apparatus of his own invention, discovered the presence of alcohol in water. It is true the proportion is almost infinitesimal, yet it is sufficiently appreciable for him to have fixed it at one-hundred-thousandth part and even less. In pushing his experiments further, he discovered the presence of alcohol in all the natural waters—such as those of the rivers and the sea, and even in rain water and melted snow. For instance, in the water of the Seine and in rain-water the proportion of alcohol was about one-thousandth, or one gramme to each cubic metre. The proportion was about the same in the sea-water, but a little greater in cold rain-water; the proportion was also sensibly greater in sewage-water. From the presence of alcohol in rain- and river-water, M. Muntz concludes that it must also exist in the air, and even in the interior of the earth; so that it may be said to exist everywhere in Nature; but he is at a loss to explain its origin. He, however, sets forth the hypothesis that it is produced by the decomposition of organic matter existing on the surface of the globe, in the depths of the sea, and in the different strata of the soil, and after its production, and in obedience of the laws of the tension of vapors, it is diffused in the atmosphere, from which it is eliminated with the meteoric waters.

NATURAL BONE-SETTERS.—I have incidentally mentioned Sugar-Loaf Hill. Almost at its base stands an old house associated with the Sweet family, the "natural bone-setters." Bone-setting has been a specialty with the family for more than a century. They have always been called "natural" bone-setters, but I have heard this tradition touching the manner in which the gift was first acquired and then passed orally from father to son. Dr. William Hunter was one of the most eminent surgeons of his day. He had held a commission as surgeon in the British Army in England, and after his arrival in America he joined the expedition against Crown Point as surgeon. One day a countryman passed his office in Newport, and, on looking in, chanced to see a skeleton hanging in its case. Pausing a moment, he said to the doctor, "There is a defect in your anatomical preparation." The doctor, on looking up, and seeing an uncouth-looking fellow at the door, smiled as he asked, "Wherein is it wanting?" "Oh, you may laugh," said the countryman, "but one of the bones in that hand is out of place." The doctor looked and said: "You are right; now tell me how it is that you know anything of anatomy." "Some day, doctor, you will be called to Narragansett; when there, stop at the door of Job Sweet, and I'll show you." Not long after the doctor was called to Point Judith, and before he returned, he called on Sweet, who placed before him a large folio volume of anatomical plates, engraved in a superb manner. The doctor looked at the volume with surprise as he said, "Where did you get it?" "Some years ago," said the bone-setter, "a vessel went to pieces on Point Judith. Many persons visited the scene of the wreck, I among the number, and there I picked

up this volume, which had floated ashore. I could not read it (it was in French), but became absorbed in the prints, made them a study, put the information so acquired to practice as opportunity offered, and, if I do not understand the text, I think I know all about the plates." This incident was related to me by a descendant of Dr. Hunter, who had it from his ancestors. — *Cor.* (*Narragansett Pier*) *Evening Post.*

Women in Sanitary Work.—A number of ladies who are prominent in professional and philanthropic work have organized a "Woman's Sanitary Association," designed to be national in its purposes and scope. It proposes to agitate and promote measures of practical sanitary reform. At their first meeting, at Dryden Springs, N. Y., August 29th, Miss S. S. Nivison, M.D., was elected President. Mrs. C. M. Clark delivered a lecture on the "Economic Sanitary Arrangements of Paris and its Hospitals."

Appearance of the Plague.—The Siberian plague is appearing to an alarming extent in most widely separated quarters of European Russia. One death from the disease has occurred at Odessa.

The Cholera Abroad.—A cable dispatch from Yokohama, received August 29th, states that out of 775 cases of cholera within twenty days at Yokohama 572 cases proved fatal. At Tokio about 80 cases and 50 deaths occur daily. An official dispatch from Manila, Philippine Islands, states that 300 deaths from cholera occurred there on August 25th. Two hundred and ninety-four of the victims were natives.

"Horse Sense" in Diagnosis.—We commend the following item to such as are often unable to make a diagnosis in apparently obscure cases:

About two miles from town he suddenly checked his horse, gazed intently on the ground, and said: "Some fellow has lost his saddle-horse here this morning."

There was no advertisement on any of the trees offering a reward for a lost horse, and as there was no lost horse in sight, we were at a loss to understand how, if a horse was lost, our friend could know so much about it.

The doctor inquired: "How do you know that a horse has been lost?"

"I see his tracks."

"Are there not hundreds of horses pasturing on the prairie, and how do you know that this is not the track of one of them?"

"Because he is shod, and the horses herding on the prairies do not wear shoes."

"How do you know that he is a saddle-horse, and lost?"

"I see a rope track alongside his trail; the horse has a saddle on, and the rope hangs from the horn of the saddle."

"But why may he not be a horse that some one has ridden over this way this morning, and why do you insist that it is lost?"

"Because, if a man had been on his back he would have ridden him on a straight course, but this horse has moved from side to side of the road, as he strolled along, and that is a plain sign that he grazed as he went, and that he had no rider."

"After that it would not surprise me," said the doctor, "if you were to tell us the age of the horse and the name of the owner."

"Well, that would not be very hard to do. There are signs that have told me the owner's name, and there are other signs that, if I had time to examine, would tell me his age. I know he is one of old man Pendergrast's horses. Pendergrast has a large bunch of horses down in the bottom, and an old nigger down there does all his shoeing, and shoes no other horses except his. So we know his shoe track just the same as we know his brand."

After this conviction on circumstantial evidence, it would not have seemed extraordinary if the Remnant had given us his opinion of the life and character of our great-grandmothers, drawing his conclusions from an examination of some of our physical peculiarities.

It is wonderful how expert these men become in reading what they call "signs" on the prairie or in the woods. No sign escapes their practised eye; all manner of tracks, trails, and marks are to them data on which to base conclusions. The peculiar movement of an animal will indicate the presence of some other animal in the neighborhood. A broken limb of a tree, a crushed weed, the débris around a camp fire, the flight of a buzzard, and other such signs, are to the cow-boy and the frontiersman what the signboards and advertisements are to the people who live in cities.—*Texas Siftings.*

The Sanitary Institute of Great Britain holds its annual meeting at Newcastle-on-Tyne, September 26th. Dr. Denis Embleton presides over the Sanitary Section.

Death of the Discoverer of the Present Theory of Blood Coagulation.—Dr. Andrew Buchanan, late Professor of Physiology in the University of Glasgow, died July 9th, at the age of eighty-four. His view of the cause of the coagulation of the blood, sustained by many experiments, was very nearly like the present accepted one, which is credited to A. Schmidt. Dr. Buchanan was also inventor of the rectangular staff for lithotomy.

Death of Professor Balfour.—Universal regret will be experienced at the announcement that Mr. F. M. Balfour, the recently elected Professor of Morphology at Cambridge, met his death quite recently through falling over a precipice in Switzerland. Francis Maitland Balfour had made for himself a position among English men of science which was inferior to that of no one in the whole field of biology. As a comparative anatomist he was famous throughout the world, and his magnificent work on Embryology is already a standard and classical treatise on the subject. The University of Cambridge sustains an irreparable loss by the sad mishap by which one of its brightest ornaments is removed from the ranks of the Royal Society. The mode by which Professor Balfour came to his end, too, will add to the sorrow that his decease will everywhere evoke.

Seventeen Anti-Vaccinators have been summoned at Eastbourne, England, for refusing to obey the order of the local justices to have their children vaccinated. A fine of £1 and costs in each case was inflicted.

A New Journal devoted especially to neurology is announced to appear soon. It will be published at Naples bi-monthly, and will be edited by Professor Francesco Vizioli of that city.

A Whole Family has been accidentally poisoned at Sallède, near Vic-le-Comte, in the Department of Puy-de-Dôme, by flour containing a lead salt.

Original Communications.

ON THE CONVALLARIA MAIALIS.

A New Remedy for Heart Disease.

By E. P. HURD, M.D.,
NEWBURYPORT, MASS.

This plant, commonly known as "lily of the valley," is a native of this country, being a garden flower of singular beauty and fragrance, also growing wild in almost all parts of the United States. Not much medicinal virtue has been attributed to it, although from time immemorial the peasants of Western Europe, where also it is native, have regarded it as a certain remedy for dropsy. In 1880, two Russian doctors, Troitzky and Bojojawlensky, published in the *Wratsch* the results of several interesting experiments with the convallaria in heart affections attended with dropsy, and the statements of the Russian doctors were confirmed by Professor Botkin, of St. Petersburg.

Professor Germain Sée, of Hotel Dieu, Paris, has recently been experimenting with the convallaria maialis, first on animals to determine its physiological and toxic properties; and then on man, selecting for his subjects patients in the hospital suffering from well-marked forms of heart disease. The results of his experiments and observations are published in the *Bulletin General de Thèrapeutique* for July 30, 1882.

The subject is so interesting and so important that I have reproduced portions of Professor Sée's article. In common with other physicians, I have long felt the need of some reliable substitute for digitalis in affections of the heart characterized by enfeeblement of the circulation and asystolism. We ring the changes on the preparations of digitalis till we cease to see any good result from the medicament; we resort to "cactus," "coca," "caffeine," and "cereus bonplandii," without success. If the "lily of the valley" will give us any help where digitalis fails, we shall joyfully welcome the new remedy.

1. *Active principle.*—The active principle is an amorphous bitter glucoside called convallaramin, obtained by treating the aqueous extract of the flowers by alcohol and chloroform. Convallaramin is comparable to digitaline in activity, though differing in effects from digitaline.

2. *Preparations.*—The best preparations are the extracts which are thus classed by Professor Sée in their order of merit: (1) The aqueous extract of the leaves. This is rather more reliable though less strong than (2) the aqueous extract of the flowers. (3) The extract of the whole plant, root, leaves, and flowers. The watery infusion of the leaves or flowers is a good form in which to prescribe the convallaria for cardiac patients.

3. *Experiments on animals.*—A drop of the extract of the flowers brought in contact with the naked heart of the frog arrests the action of that organ in about two minutes. The same result is obtained when the medicament is introduced under the skin. The convallaria is then a poison which, like digitalis, upas antiar, erythrophleum, arrests the heart in systole. In the case of the dog, four drops of the extract injected into a vein, causes death in ten minutes by arrest of the heart. The heart is first slowed and the respirations quickened, then the heart's action becomes irregular and the pulsations become faint and very rapid; the blood-pressure first augments and then is lowered, the respirations become slower and slower; the heart's action ceases, pressure falling to zero, and the respiratory movements cease in their turn. The excito-motor power of the nerves and nerve-centres is unaffected. The excitability of the pneumogastrics is weakened, not destroyed. No diuretic effects were observed in the dog.

4. *Clinical observations.*—Professor Sée reports twenty cases, occurring in hospital and city practice, in which the effects of the convallaria were noted. Five were cases of mitral insufficiency, characterized by want of rhythm ("arythmie"), œdema of the limbs, dyspnœa, inability to ascend stairs, asystolism more or less pronounced. The extract of convallaria maialis was given in doses of one-half gramme (in some cases increased to one gramme) daily, and to these five patients, with marked benefit. The heart's action became stronger and more regular, the breathing became better, there was a notable increase in the urine, and the condition generally of the patient was improved. In all these cases the œdema of the limbs disappeared under the use of the medicine The sixth case was one of mitral constriction which was immediately benefited. There was a speedy improvement in the pulse, with increase of urine and decrease, finally disappearance, of the œdema. Two cases of "primitive dilatation of the heart" were treated successfully with half gramme doses daily, of the extract. Several cases of aortic insufficiency were relieved of the more distressing symptoms by the same remedy. In three cases only of the twenty was the medicine given without success. One was complicated with lead poisoning, another was too far advanced for any remedy to take effect, the third was a case of atheromatous disease of the heart, aorta, and arteries, with interstitial nephritis; there was in this patient an amelioration for a few days, but the amelioration was not persistent.

CONCLUSIONS.

Dr. Sée's conclusions are as follows:

First.—The convallaria maialis constitutes one of the most important cardiac remedies which we possess.

Second.—In the form of the aqueous extract of the entire plant (which is a very convenient way of giving the medicine), administered in the dose of from one-half gramme to one and one-half grammes daily, the convallaria produces on the heart, blood-vessels, and respiratory organs effects constant and constantly favorable; to wit, slowing of the beatings of the heart, with often a restoration of the normal rhythm, and on the other hand, augmentation of the energy of the heart, also of the arterial pressure; in fine the inspiratory force is increased, and the *besoin de respirer* is less injurious, less painful.

Third.—The effect the most powerful, the most constant, and the most useful is the abundant diuresis, which is above all things essential in the treatment of cardiac dropsies.

Fourth.—The therapeutic indications are summed up as follows:

(a.) In palpitations resulting from a state of exhaustion of the pneumogastric nerves (cardiac paresia), the most frequent source of palpitations.

(b.) In simple cardiac arythmia, with or without hypertrophy of the heart, with or without lesions of the orifices or valves of the heart.

(c.) In mitral constriction, especially when it is accompanied with failure of compensation on the part of the left auricle and right ventricle; the contractile force augments visibly under the convallaria, as the sphygmograph testifies.

(d.) In mitral insufficiency, especially when there are pulmonary congestions, and when, as a consequence, there is dyspnœa with or without nervous trouble of the respiration.

(e.) In Corrigan's disease the peripheral arterial pulsations disappear, and respiration becomes markedly restored. In dilatation of the left ventricle without compensatory hypertrophy it restores energy to the heart, which tends to become more and more feeble and dilated.

(f.) In dilatations of the heart with or without hypertrophy, with or without fatty degeneration, with or without sclerosis of the muscular tissue, the indications of the convallaria maialis are clear.

(g.) In all cardiac affections indifferently, from the moment that watery infiltrations appear, the convallaria has an action evident, prompt, and certain.

(h.) In lesions with dyspnœa the effect is less marked. To combat cardiac dyspnœa, convallaria is inferior to morphia and especially to iodine, but morphia suppresses the urine, and the preparations of iodine are every way preferable. The combination of convallaria maialis with iodide of potassium in the treatment of cardiac asthma constitutes one of the most useful methods of treatment. Finally, in cardiopathies with dropsy the convallaria surpasses all other remedies. One is often obliged to suspend the employment of digitalis on account of vomiting, digestive disturbances, cerebral excitation, the dilatation of the pupil which it so often produces after a prolonged use of this medicament, etc.

The final action of digitalis is exhaustion of the heart, increase with enfeeblement of the heart's pulsations—just the opposite effects from what we seek when we give the drug.

Convallaria maialis has no deleterious effects on the economy, and has no cumulative action.

Postscript.—I have recently obtained a liquid extract of the Lily of the Valley from the manufactory of Parke, Davis & Co. These enterprising pharmacists have advertised the cardio-tonic virtues of convallaria in terms almost identical with those employed by the distinguished French professor. It is gratifying to observe that their claim for convallaria, "that it is a safe and efficient substitute for digitalis," has received such high endorsement, and from a medical writer and teacher evidently ignorant of the fact that certain eclectic practitioners in this country have for years prescribed the lily of the valley in cardiac dropsy.

I have lately employed Parke, Davis & Co.'s preparation in two cases. The one is a patient suffering from Corrigan's disease—partly compensated. He is incapacitated for any but very moderate exercise; has attacks of syncope, dyspnœa, and angina. Though he has taken the convallaria only three days, he has been entirely free from his usual faint and giddy turns, has had no angina pectoris, and has been able to do his work with increased comfort. The other is a case of aortic and mitral insufficiency, with enormous dilatation and marked asystolism. There is dyspnœa (orthopnœa) from pulmonary stasis and hydrothorax, some œdema of the extremities, vomiting and digestive disturbance. This patient is greatly dependent on hypodermics of morphia. I have prescribed the liquid extract of convallaria in doses of five drops every four hours. So far the effect has been gratifying. There is more force in the cardiac pulsations, and in the pulse at the wrist. The dyspnœa is relieved. The quantity of urine is notably augmented. The patient has better nights and can take more food. I do not look for any permanency in these good results; granulo-fatty degeneration of the heart is evidently far advanced.

August 30th.—Mrs. C——, the patient referred to in the last paragraph, continues to improve after a fortnight's use of the new remedy. The cardiac contractions are slower and more friable, the dyspnœa has disappeared with the pulmonary stasis and the hydrothorax. She can now lie down *flat on her back.* This relief has been coincident with a copious diuresis, commencing the third day of the administration of the medicine. For several days the quantity of urine passed during twenty-four hours has been as high as sixty ounces (before commencing the remedy the average quantity *per diem* was eight ounces). The dose now taken of the convallaria maialis is twelve drops every four hours. For a while I was able to suspend the morphine injection (one grain at night subcutaneously), but latterly I have been obliged to resume it on account of the return of the angina, from which she has long been a sufferer. It is evident that the convallaria has done all that any remedy could be expected to do in this case, as atheromatous changes in the nutrient vessels of the heart are more than probable.

ON NERVE-STRETCHING.

By W. J. CHANDLER, M.D.,
SOUTH ORANGE, N. J.

Part II.

Let us now, in conclusion, consider the opinions of the medical profession in regard to nerve-stretching.

We here notice not only a diversity of views, but also a tendency to mould the public opinion in almost *point-blank opposition to statistical facts.*

From many personal communications we make a few extracts.

"April 13, 1882.

"My experience in nerve-stretching has been quite limited, and, as far as it goes, leads me to believe that no permanent benefit results from the practice. A temporary respite is undoubtedly secured, but only temporary. "D. Hayes Agnew."

"April 18, 1882.

"There is no question as to the value of nerve-stretching. This is, practically, what is done when we relieve a spasm of the muscle of the leg by stretching the limb. . . . . The only question is, whether the danger attending the exposure of large nerves by incisions and then making extension to a degree beyond what is normal, is not greater than the possible or probable advantages will warrant. . . . . I have never exposed a nerve for the purpose of stretching it, and shall not until the weight of testimony in its favor is greater than it is at present. "Frank H. Hamilton."

Dr. Wm. A. Hammond thinks: "Much is to be expected of nerve-stretching in the neuralgic affections. In locomotor ataxia it will only produce temporary relief."

Dr. Geo. M. Beard writes, April 13, 1882: "Nerve-stretching is an addition to our means of treating nervous disease, but not as important as was at one time hoped it would be. The disappointments following it have been many and are increasing. It is especially indicated in neuralgia and local chorea. In ataxia it is quite uncertain, and many of the good effects have been of a temporary character; but it is justifiable."

Dr. A. C. Post writes, April 13, 1882: "It appears to be especially applicable to the treatment of neuralgia and spasmodic affections. I intend to try it when appropriate cases shall present themselves."

The above extracts may be taken as a fair representation of the professional opinion in this country.

It may be styled a *generous conservatism*, and we respect it.

At a recent discussion in the Berlin Medical Society, Prof. Langenbeck read a paper containing deductions from one hundred cases operated on by himself at St. Lazonus Hospital. Eighty-four per cent. of the neuralgic cases were cured. They were observed from three to eighteen months after the operation. In his general conclusions, he observes, that while we have much to learn as to important details—such as the amount of traction, direction of traction, what diseases and in what stage of disease the operation is most effective, etc.—we must admit that in nerve-stretching we have a most valuable weapon with which to combat various painful affections. The discussion which followed has become a part of the medical literature of the world, and the general impression produced is that the operation is a failure.

We could not close this paper without noticing such a discussion, the more especially as it finds an echo of endorsement in this country.

Dr. D. W. Yandell sends us the following from the Louisville *Medical News*, as expressing his views on the subject.

"At a society meeting in this city, a few days ago, it seemed to be the general opinion that while nerve-stretching as a remedy for centric diseases had failed to come up to expectation, it was still worthy of trial in the treatment of peripheral affections—such as neuralgias and local spasms.

"Our latest advices are calculated to destroy all faith in it as a remedial measure. In the *Medical Press and Circular* for April 12th is a summary of a debate on this subject, in which the leading Berlin surgeons and physicians took part. We learn from it that Dr. Westphal stated that since 1877, when he first undertook this operation, he *had not seen a single case which it had helped.*[1] On the contrary, a detailed account was given of cases of tabes dorsalis, tabes dorsalis spastica, paralysis agitans, and neuralgias of all kinds made worse by stretching the nerves. He related a case which illustrates the extraordinary pertinacity with which the experiment was tried, only to fail in the end. Dr. Lagenbeck had within six months operated seven times on one patient. He stretched both crural nerves and both sciatics; then he cut a piece out of the peroneal, another out of the plantar nerve, and, finally, as the great toe was the chief seat of pain he amputated that; and, notwithstanding all this, the patient's condition was not improved in the slightest degree. He had seen the case of Nussbaum's celebrated as a successful stretching of an intercostal nerve. The patient assured him (Westphal), shortly after the operation, that the pain was as bad as ever; in fact, it seemed even worse than before. At any rate, the result was far from being as successful as was generally believed.

"Doctors and patients alike are enamored of novelty, and both feel a psychical impression that monopolizes attention when some startling operation in which great confidence is expressed has been performed.[2] Westphal attributes the temporary improvement sometimes seen to this psychological effect, which on ataxic cases, naturally hopeful, is especially marked. A sanguine doctor infuses faith and hope into the patient's mind; and, as a result, for a time he appears to be benefited by anything new or wonderful, whether it be the galvanism of Remak, or this more formidable measure of cutting down upon and pulling the offending nerve.

"Dr. Bardeleben testified to the accuracy of Westphal's report of the sequel to operation in Nussbaum's case. He stated that though he had performed nerve-stretching for the medical staff very frequently, he had never seen good results.

"We give great prominence to these conclusions, in the hope that American surgeons, who have just fairly welcomed this procedure, will see the propriety of bidding adieu to it. The chances of benefit from it are not great enough to justify the pain and risk attending its performance."

When men rely upon ridicule and misrepresentation, they but confess the weakness of their cause. While we may not commend the wisdom of seven operations on one patient, they attest a *firmness of conviction* as the outgrowth of *successful experience* which even ridicule cannot overcome. But when we are told that Nussbaum's "intercostal" case is extolled as a "success," we are grossly misled. For a short time it was hoped and believed that a cure had resulted, but the contrary proved to be the truth; and this case has been recorded in the list of failures in all the reports which we have examined.

Again, Dr. Westphal asserts that he has not seen a single case benefited by the operation. This statement is astounding; for we must believe either that the learned gentleman's experience has been singularly unfortunate, or else that there are others than "ataxic persons" who are "only too ready to believe whatever is required of them."

In either case, it proves nothing. Five failures will not disprove even one success; and when statistics gathered from all parts of the world by careful, trusty observers testify so frequently and conclusively in favor of the operation, we must either admit this favorable testimony, or impugn the wisdom, competence, and integrity of some of the most highly esteemed and conservative operators of the present day.

It is not the first time that statistics and public opinion have come in conflict. In 1809, Dr. McDowell, of Kentucky, published thirteen cases of ovariotomy, eight of which were successful. And yet as late as 1850, a medical society in London considered it "derogatory to the medical profession to even discuss ovariotomy."

Tracheotomy has met with an equal and perhaps more just opposition.

Paracentesis of the chest was considered so hazardous a procedure that the illustrious Dupuytren, when offered its relief in his own case, replied that he would rather "die by God's hand than by man's." And thus has it been with the majority of operations which to-day have the confidence of the profession. Why, then, should we expect any less opposition in the novel operation of nerve-stretching.

No! it will be opposed; it will even be misrepresented. But, while it may not accomplish all that its most ardent advocates claim for it, while, too, there is much to be learned as to particular modifications of the operation, and their adaptability to different forms of disease, we feel confident that an operation which develops so much statistical strength, has certainly enough of real merit to overcome opposition, and stand, in the future, side by side with ovariotomy, tracheotomy, and paracentesis thoracis, in the honored list of accredited surgical operations.

[1] A letter from Professor Westphal, received since this paper was written, leads me to infer that he would restrict his unfavorable criticisms to cases of tabes dorsalis.

[2] Dr. Westphal "believes the so-called results are the effect, psychologically, upon the patient undergoing a great operation, which he is assured must prove successful in his case; and from the sanguine view which ataxic patients take of their condition, they are only too ready to believe themselves better if required."

TABLE A.

(1) *Sciatica.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Billroth 1	.....	.....	.....	.....	Sciatic.	Cure.	
2	Bell 2	.....	Sciatica.	.....	.....	.....	Doubtful.	
3	Bernays 3	.....	Sciatica.	8 months.	.....	Sciatic.	Temporarily improved.	Pain relieved for six days, when 1½ inch of peroneal and ext. saphen nerves was excised. Result, paralysis and relief from pain.
4	Bernays	.....	Sciatica.	.....	.....	.....	Failed.	
5	Blum 4	m. 33	Sciatica.	.....	.....	Sciatic.	Cured.	
6	Blum	m. 39	Sciatica.	.....	.....	Sciatic.	Improved.	
7	Blum 5	.....	Sciatica.	.....	.....	Sciatic.	Cured.	
8	Blum	.....	Sciatica.	.....	.....	Sciatic.	Cured.	
9	Berger 6	.....	Sciatica.	.....	.....	.....	Cured.	
10	Büttner	m. 36	Sciatica.	8 years.	Dec. 13, 1881.	Right sciatic.	Cured.	For history, see Appendix.
11	Büttner	m. 40	Sciatica.	8 months.	June 17, 1881.	Right sciatic.	Cured.	For history, see Appendix.
12	Bramwell 7	m.	Sciatica.	.....	.....	.....	Cured.	First operation a failure. Second operation successful.
13	Bramwell	m. 27	Sciatica.	.....	.....	.....	Improved.	Second operation successful.
14	Bramwell	m. 46	Sciatica.	14 months	.....	.....	Cured.	Followed by temporary paralysis and anæsthesia.
15	Bramwell	f. 28	Sciatica.	.....	.....	.....	Cured.	Two operations, at intervals of 1 year.
16	Bramwell	m.	Sciatica.	.....	.....	.....	Improved.	
17	W. A. Boyd 8	m. 56	Sciatica.	7 months.	May 27, 1878.	Right sciatic.	Cure.	Anæsthesia for six weeks after stretching, after which cure was complete.
18	Cameron 9	m. 39	Sciatica.	7 months.	.....	.....	Cure.	Two stretchings.
19	Cheyne..... 2	m 41.	Sciatica.	10 months	April 23, 1877.	Sciatic.	Cure.	Fatty degeneration of nerve.
20	Cheyne..... 10	m. 40	Sciatica.	5 years.	April 19, 1877.	Sciatic.	Cure.	
21	Cheyne	m. 40	Sciatica.	.....	.....	.....	Cure.	
22	Davidson.....11	m. 62	Sciatica.	5 years.	Sept. 18, 1881.	Right sciatic.	Cure.	Contracture of limb relieved by the stretching. Quite forcible extension.
23	Davidson.....	m. 35	Sciatica.	1½ year.	Oct. 27, 1881.	Right sciatic.	Cure.	Less forcible extension. Slight return of pain after three weeks, which, however, soon disappeared permanently.
24	Davidson.....	m. 65	Sciatica.	4 years.	Nov. 18, 1881.	.....	Cure.	Atrophy of limb and shortening overcome by stretching.
25	Davidson.....	m. 31	Sciatica.	8 years.	Dec. 9, 1881.	Right sciatic.	Great improvement.	Considerable shortening; slight atrophy. Very much relieved by stretching.
26	Dougherty.....	m. 43	Sciatica.	4 months.	Dec. 31, 1881.	Sciatic.	Temporarily improved.	See Appendix.
27	Esmarch 12	.....	Sciatica.	.....	.....	Sciatic.	Cured.	
28	Fenger 3	f. 35	Sciatica.	1 year.	Oct. 6, 1880.	Right sciatic.	Cured.	Nerve exposed in upper third. Suppuration for eight weeks. Temporary paralysis of sphincter ani and anal region and thigh.
29	Fenger	f. 45	Sciatica from cancer of the pelvic bones.	4 months.	Jan. 6, 1881.	Left sciatic.	Relief.	Pain ceased after operation. Death from exhaustion, thirty-six days later.
30	Fenger	m. 60	Sciatica, due to obscure central disease.	.....	Aug. 7, 1880.	Left sciatic.	Relief.	Pain ceased after operation. Death from central disease four weeks later.
31	Gillette.....13	f.	Sciatica.	16 months	.....	.....	Cured.	
2	Gillette.....	f. 43	Sciatica.	.....	.....	.....	Cured.	
3	W. A. Hammond..	m.	Sciatica.	Several	.....	Sciatic.	Cured.	These four cases had atrophy of affected limb. The sciatic was exposed in the lower third, and only moderate traction made.
4	W. A. Hammond..	m.	Sciatica.	years.	.....	Sciatic.	Cured.	
35	W. A. Hammond..	f.	Sciatica.	Several	.....	Sciatic.	Cured.	
36	W. A. Hammond..	f.	Sciatica.	years.	.....	Sciatic.	Cured.	
37	Hildebrand 14	f. 32	Sciatica.	.....	.....	Left sciatic.	Cured.	Nerve exposed in popliteal space. Woman able to work in eight days.
38	Küster 15	.....	Sciatica.	.....	.....	Sciatic.	Cured.	
39	Küster 16	.....	Traumatic sciatica.	.....	.....	Sciatic.	Cured.	Two operations.
40 to 47	Langenbeck 15	.....	Sciatica.	.....	.....	Sciatic.	Cured.	Nerve exposed in lower third. Cases under observation from three to eighteen months.
	Langenbeck 15	.....	Sciatica.	.....	.....	Sciatic.	Cured.	
48	Maag.....17	f. 20	Sciatica.	18 months	.....	Sciatic.	Cured.	
49	Maag.....	f. 19	Sciatica.	3 months	.....	Sciatic.	Cured.	Wound suppurated.
50	Macfarlane.....18	f. 29	Sciatica.	11 months	.....	.....	Cured.	
51	Macfarlane.....	.....	Sciatica.	10 months	Nov. 3, 1877.	Sciatic.	Cured.	
52	Manle.....19	m. 45	Sciatica.	9 months	.....	.....	Cured.	
53	Massing..... 3	10	Traumatic sciatica.	.....	.....	Sciatic.	Improved.	Contracture, with hyperæsthesia. No improvement until seven weeks after operation. Seven months later he was better, though still unable to walk.
54	Massing.....20	12	Traumatic sciatica.	.....	.....	.....	Improved.	
55	Mackintosh.....21	m. 41	Sciatica.	14 years.	.....	.....	Cured.	
56	Morton.....22	m. 33	Sciatica.	8 months.	Oct. 22, 1881.	Left sciatic.	Cured.	
57	Naismith.....23	m. 54	Sciatica.	7 years.	Aug. 10, 1880.	Left sciatic.	Cured.	
58	Nussbaum.....24	.....	Sciatica.	.....	.....	Left sciatic.	Cured.	Nerve exposed in popliteal space. Hemorrhage from popliteal artery.
59	Panas	m.	Traumatic sciatica.	4 years.	.....	Left sciatic.	Cured.	
60	Patrubau.....26	m.	Sciatica.	3 years.	.....	.....	Cured.	
61	Patrubau..... 3	.....	Sciatica.	.....	.....	Sciatic.	Improved.	
62	Pierson.....	m. 39	Sciatica.	Several years.	June 30, 1881.	Sciatic.	Cure.	See Appendix.
63	Pooley 27	m. 30	Sciatica.	9 years.	May 12, 1880.	Right Sciatic.	Cure.	
64	Purdie 28	m.	Sciatica.	Several months.	.....	Sciatic.	Cure.	No suppuration.

(1) *Sciatica.—Continued.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
65	Walter Pye.....29	.....	Sciatica.	.....	.....	.....	Improved.	
66	Richardson. ...30	.....	Sciatica.	.....	.....	Sciatic.	Cured.	
67	Spencer 31	m.	Sciatica.	7 months.	Sept. 3, 1879.	Sciatic.	Cured.	
68	Trendelenburg..32	.....	Sciatica.	.....	.....	Sciatic.	Partial relief	Sciatica due to spinal injury.
69	Trombetta.....33	m. 75.	Sciatica.	.....	.....	.....	Cured.	
70	Hahn.....	f.	Sciatica, with epileptiform convulsions.	.....	.....	.....	Improved.	A previous excision had failed. The improvement has continued for over six months.

(2) *Traumatic Neuralgia.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Andrews..... 3	m.	Tonic spasm, with pain in both legs.	1 year.	May 15 and 24, 1876.	Both crural and sciatics.	Cured.	Stretching *left* crural and sciatic relieved *right* limb. Stretching right crural and sciatic relieved left limb. Seven months after operation, patient performed the duties of a sailor.
2	Ashhurst.....34	m. 33.	Neuralgia, hand and arm.	10 months	.....	Medium ulnar and musculo spiral.	Improved.	
3	Ashhurst	.....	Traumatic neuralgia.	.....	.....	Musculo spiral.	Temporarily improved.	
4	Ashhurst	.....	Traumatic neuralgia.	.....	.....	Medium.	Cured.	Recovery remained complete one year after stretching.
5	G. Byrd.....35	m. 21.	Neuralgia after amputation.	.....	.....	.....	Failed.	
6	Callender.....36	m. 20.	Neuralgia after amputation.	1 year.	.....	Medium.	Cured.	The right hand was injured by a circular saw. Amputation; neuralgia of stump and arm.
7	Callender.....37	m.	Neuralgia after injury.	.....	.....	Medium and ulnar.	.....	
8	Czerny 38	m. 24.	Neuralgia of parts supplied by ulnar nerve.	.....	.....	Ulnar.	Improved.	Neuralgia due to suppuration in elbow-joint. Ulnar stretched in axillary plexus. Recovery not perfect.
9	Crede 39	.....	Neuralgia of parts supplied by left radial.	18 months	.....	Brachial plexus.	Cured.	
10	Duplay.....40	m. 26.	.....	.....	.....	.....	Cured.	Neuralgia due to compression of the ulnar nerve.
11	Estländer 41	m. 27.	Traumatic neuralgia, right hand.	.....	.....	Medium.	Improved.	
12	G. M. Hammond 42	m. 45.	Traumatic neuralgia, right hand and arm.	6 months.	May 29, 1881.	Right ulnar.	Cured.	No return of pain one year after the operation.
13	Hoover.....27	.....	Traumatic neuralgia, left leg.	Many years.	May 25, 1880.	Left sciatic.	Relieved.	Accompanied by spasms of muscles of leg.
14	Küster 15	m.	Traumatic neuralgia.	.....	.....	Ulnar.	Temporary relief.	
15	Peterson 43	.....	Traumatic neuralgia.	.....	.....	Post tibial.	Cured.	Wound of left leg. Long-continued, deep-seated pain. Extravasated blood found in sheath of nerve.

(3) *Neuralgia of Different Branches of Fifth Pair of Cranial Nerves.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of operation.	Nerve Stretched.	Result.	Remarks.
1	Croft..... 3	.....	Facial neuralgia.	.....	....	Infra orbital.	Cured.	Spasms of face; ⅝ inch of nerve excised; nerve then stretched. Two light attacks during first year after operation; after that, recovery was complete.
2	Czerny 38	m. 60.	Neuralgia of ophthalmic branch.	.....	.....	Frontal.	Failed.	
3	Czerny	m. 63.	Supra orbital neuralgia	.....	.....	Frontal and supra orbital	Relieved.	Stretching was followed by excision, to complete the cure.
4 to 12	Hahn 44	.....	Neuralgia of 5th pair.	.....	.....	.....	Temporarily improved.	All cases relapsed after six to eight months.
	Hahn 44	.....	Neuralgia of 5th pair.					
13	Hahn 45	.....	Neuralgia inf. max.	.....	.....	.....	1 improved.	Nerve was stretched and resected.
14	Hahn 45	.....	Neuralgia inf. max.	.....	.....	.....	1 failed.	Nerve was stretched and resected.
15	Hahn	.....	Supra and infra orbital neuralgia.	.....	.....	.....	Failed.	
16	Higgins 29	m. 62.	Neuralgia of ophthalmic branch.	3 years.	.....	Supra orbital.	Cure.	Neuralgia followed extirpation of the left eye.
17	Higgins	m. 53.	Neuralgia of ophthalmic branch.	1 year.	.....	Right supra orbital.	Cure.	Neuralgia followed extirpation of the right eye.
18	Kocher.....46	m. 32.	Supra orbital neuralgia	14 years.	.....	.....	Cured.	

(3) *Neuralgia of Different Branches of Fifth Pair of Cranial Nerves.--Continued.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
19	Küster 15	.....	Neuralgia of 5th pair.	.....	....	.....	1 cured.	
20	Küster 15	.....	Neuralgia of 5th pair.	.....	....	.....	1 unknown.	
21	Lange	m. 63	Neuralgia of 5th pair.	.....	.....	Infra orbital.	Cured.	Nerve twice resected, and failed to relieve. Stretching has given relief up to the present time (four months).
22	Langenbeck 47	.....	Neuralgia of 5th pair.	.....	.....	Buccal branch of inf. max.	.....	
23	Massing 48	f. 60	Facial neuralgia.	Many yrs.	.....	Sup. orbital.	Cured.	
24	Massing 49	.....	Ophthalmic neuralgia.	.....	.....	Sup. orbital.	Cured.	
25	Nussbaum 3	.....	Neuralgia of supra and infra orbital.	.....	.....	R. and L. supra and infra orbitals.	Temporary relief.	Stretched and excised. Relapse on left side after a few weeks.
26	Polilaion 50	m. 62	Spasmodic facial neuralgia.	3 months.	.....	Inf. dental.	Cured.	
27	Polaillon 51	m.	Neuralgia of 5th pair.	.....	.....	Sup. dental.	Cured.	
28	Purdie 28	.....	Epileptiform neuralgia 2d fr. of 5th.	.....	.....	Infra orbital.	Cured.	
29	Quinquand 52	f. 70	Spasmodic facial neuralgia.	16 years.	.....	Ext. frontal.	Failed.	
30	Quinquand	f. 76	Supra orbital neuralgia	6 months.	.....	Ext. frontal.	Cured.	
31	Spence 31	m.	Spasmodic facial neuralgia.	2½ years.	May 22, 1879.	Infra orbital.	Cured.	On fifth day after operation, the pain returned. The wound was opened and the nerve stretched again, after which, relief was permanent.
32	G. Stewart 29	m. 70	Neuralgia sup. max.	16 years.	.....	.....	Cured.	Two stretchings.
33	Vogt 53	f. 50	Spasmodic facial neuralgia.	6 years.	.....	Infra orbital.	Cured.	
34	Vogt	f.	Neuralgia lower jaw.	10 years.	.....	Inf. dental.	Cured.	
35	Walsham 35	f. 50	Spasmodic facial neuralgia.	10 years.	.....	Infra orbital.	Cured.	
36	Crede 47	f.	Facial neuralgia.	9 years.	.....	Inf. maxill'y.	Cured.	Stretched and excised.
37	Baillou 98	.....	.....	.....	.....	Inf. dental.	Great improvement.	Baillou trephined the inf. maxilla and stretched the nerve 1¼ centimetre. The nerve was not diseased.

(4) *Miscellaneous Neuralgic Affections.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	D. Hayes Agnew 54	.....	Neuralgia.	.....	.....	Sciatic.	Temp. relief.	Neuroma removed.
2	D. Hayes Agnew 54	.....	Neuralgia.	.....	.....	Median.	Temp. relief.	
3	Boldt	f. 26	Neuralgia left leg and thigh.	2 years.	.....	Ant. crural.	Cured.	See Appendix.
4	Le Dentu	m.	Facial neuralgia.	5 years.	Nov. 2, 1881.	Languid.	Cured.	
5	Le Dentu	f.	Facial neuralgia.	.....	.....	Languid.	Cured.	
6	Esmarch 39	.....	Neuralgia.	.....	.....	Peroneal.	Cured.	
7	Esmarch	m.	Neuralgia of testicle.	.....	.....	Ext. spermatic.	No relief.	The neuralgia followed castration.
8	Finlay 56	.....	Neuralgia.	.....	.....	.....	.....	
9	G. M. Hammond 42	f.	Hemiplegic neuralgia.	7 years.	.....	Left ulnar.	Cured.	Hemiplegia remained, but pain was entirely relieved.
10	Hildebrand 14	m. 32	Neuralgia of arm.	.....	.....	Brachial plexus.	Cured.	
11	Keleff 57	f. 35	Intercostal neuralgia.	.....	.....	4th, 5th and 6th intercostals of r. side.	Cured.	
12	Küster 47	.....	Neuralgia.	.....	.....	.....	.....	
13	Küster 47	.....	Neuralgia.	.....	.....	.....	.....	
14	Langenbuck ... 39	.....	Brachial neuralgia.	.....	.....	Brachial plexus.	Partial relief	
15	Langenbeck 39	.....	Brachial neuralgia.	.....	.....	Brachial plexus.	Partial relief	
16	Langenbeck 39	.....	Brachial neuralgia.	.....	.....	Brachial plexus.	Partial relief	
17 to 21	Langenbeck 44	.....	Neuralgia.	.....	.....	.....	Cured.	
	Langenbeck 44	.....	Neuralgia.	.....	.....	.....	Cured.	
22	Maag 8	.....	Neuralgia and contracture thumb and fingers	.....	.....	Median.	Cured.	Caused by a punctured wound in the hand.
23	Morton and Cox. 59	f.	Neuralgia of arm.	.....	.....	Ulnar.	Cured.	
24	Morton and Cox. 59	m. 32	Neuralgia of foot.	4 years.	.....	Sciatic and int. poplit.	Failed.	
25	Nussbaum. 60	m. 20	Intercostal neuralgia.	.....	.....	.....	Failed.	8th, 9th and 10th intercostals of each side stretched.
26	Omboni 61	.....	Neuralgia.	.....	.....	Brachial plexus.	Cured.	
27	Purdie 28	.....	Neuralgia index finger.	.....	.....	Digital nerves.	Cured.	

(4) *Miscellaneous Neuralgic Affections.—Continued.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
28	Schüssler.....47	f. 53.	Occipital neuralgia.	3 years.	.....	Occipitalis major.	Cured.	Nerve exposed where it passes through the trapezius; sheath thickened and injected, stretched in both directions; few attacks of pain during first 3 days; none afterward; wound healed by first intention. The disease had affected the right half of the occipital region.
29	Spence 31	.....	Neuralgia index finger.	7 years.	June 30, 1879.	Digital nerves.	Cured.	Patient had a whitlow on index finger, which became contracted; paroxysmal pain; nerves of finger stretched on a blunt hook.
30	Vogt 62	f.	Neuralgia.	10 years.	.....	Ulnar.	Cured.	

TABLE B.

Spasmodic Affections. (1) *Mimic Spasms.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Baum 63	f. 35	Tic non douloureux de la face.	6 years.	1878.	Facial.	Cure.	
2	Benedikt 64	.....	Tic non douloureux de la face.	.....	.....	Facial.	Cure.	Long-standing paralysis with secondary *tic*. Nerve degenerated. Operation completely relieved the *tic*, and the paralysis began at once to disappear.
3	Davidson.....11	f. 53	Tic non douloureux de la face.	1 year.	Nov. 24, 1881.	Infra orbital.	Cure.	Twitching of lids, sclerotitis and hazy cornea; disappeared after the stretching.
4	Eulenberg 65	.....	Tic non douloureux de la face.	.....	.....	Facial.	Cure.	Temporary paralysis.
5	Eulenberg 3	.....	Tic non douloureux de la face.	.....	.....	Facial.	Cure.	Temporary paralysis (5 months).
6	Godlee 66	m.	Tic non douloureux de la face.	.....	.....	Facial.	Cure.	Temporary paralysis.
7	Godlee 67	f. 72	Tic non douloureux de la face.	6 years.	.....	Facial.	Cure.	Temporary paralysis.
8	Germon 68	.....	Tic non douloureux de la face.	.....	.....	Facial.	Cure.	Temporary paralysis.
9	Hahn 44	.....	Tic non douloureux de la face.	.....	.....	Facial.	Slight imp.	No relapse of spasm for 6 months.
10	Hahn	.....	Tic non douloureux de la face.	.....	.....	Facial.	Great imp.	Temporary paralysis.
11	Putnam 69	m. 25	Tic non douloureux de la face.	3 years.	.....	Facial.	Cure.	
12	Schüssler.....70	f. 39	Tic non douloureux de la face.	8 years.	.....	Facial.	Cure.	
13	Southam 68	f. 59	Tic non douloureux de la face.	2 years.	March 28, 1881	Facial.	Cure.	Traction equal to 4 or 5 pounds; paralysis 5 weeks; affection originally caused by fright.
14	Southam	f. 32	Tic non douloureux de la face.	4 years.	Aug. 1, 1881.	Facial.	Cure.	Right facial; stretched at its emergence from stylo-mastoid for: paralysis for 4 weeks.

(2) *Torticollis, etc.*

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Annandale 30	f. 24	Spasmodic torticollis.	.....	.....	Spinal acces.	Cured.	Stretching and excision of spinal acc.
2	Blum..... 5	f. 18	Hysterical tremor.	4 months.	Aug. 4, 1880.	Right sciatic.	Cured.	
3	Hansen 71	f. 31	Spasmodic torticollis.	6 months.	.....	Spinal acces.	Cured.	Stretched and excised.
4	Hansen 30	30	Spasmodic torticollis.	18 months	....	Spinal acces.	Cured.	Stretched and excised.
5	Küster 44	.....	Spasmodic torticollis.	....	.....	Spinal acces.	Great relief.	
6	Morgan 30	.....	Spasmodic torticollis.	.....	.....	Spinal acces.	Cured.	
7	Morgan	f. 53	Spasmodic torticollis.	.....	.....	Spinal acces.	Failed.	*Lancet*, April, 1879.
8	Southam 68	f. 53	Spasmodic torticollis.	23 years.	Oct. 7, 1880.	Spinal acces.	Slight imp.	Subsequent excision. In these two cases the relief from stretching continued 5 or 6 weeks.
9	Southam	m. 14	Spasmodic torticollis.	10 years.	Oct. 23, 1880.	Spinal acces.	Improved.	
10	Studsgaard 71	f. 30	Spasmodic torticollis.	....	.....	Spinal acces.	Cure.	Stretched and excised.
11	Studsgaard	f. 31	Rotatory movement of the head.	.....	.....	Spinal acces.	Cure.	

TABLE C.

Contractures.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Berridge	20	Painful contracture of lower limbs.	.....	.....	Sciatic.	Failed.	No improvement up to the tenth day.
2	Callender.	36 m. 41	Painful contracture of arm.	6 years.	.....	Median.	Cured.	
3	Gartner	72 f. 38	Old hemiplegia with contracture.	....	.....	.....	Died.	Died from entrance of air in the veins.
4	Israel	44 child 3 yrs.	Spasms of limbs with contracture.	.....	.....	Both sciatics.	No improvement.	
5	Nussbaum	72 m. 23	Contracture of muscles of thorax and arm.	....	.....	Brachial plexus.	Cured.	

TABLE D.

Peripheral Paralysis.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Blum	73 m. 29	Traumatic paralysis of arm and hand.	3 months.	....	Radial and median.	Improved.	
2	Bomford	74 m. 40	Paralysis of hand and arm.	.....	Aug. 6, 1880.	Both ulnars.	Improved.	Anæsthetic leprosy. Anæsthesia and atrophy. Right ulnar could be felt as a cord (three times its usual size) under the skin. The left nerve was also thickened, but not uniformly. It ruptured on being stretched. The right hand recovered more rapidly than the left.
3	Callender	1 Inf't.	Infantile paralysis.	.....	.....	Ext. popliteal.	Failed.	
4	Israel	44 Inf't.	Infantile spinal paral.	....	.....	Left sciatic.	No imp.	
5	McLeod	75 m. 26	Paralysis of right hand and arm.	8 years.	.....	Ulnar.	Improved.	
6	Muralt	76	Paralysis of hand.	.....	.....	Radial.	Cured.	Due to fracture of humerus, which had united in a bad position.
7	Simon	77 m. 5	Paralysis of right leg.	3 years.	Aug. 5, 1880.	Right sciatic.	Great imp.	
8 to 37	Lawrie	1	Anæsthetic leprosy.	.....	.....	.....	Improved.	In these cases the sensation returned soon after the operation and muscular strength was regained.
38	Wallace	3	Anæsthetic leprosy.	....	....	.....	Improved.	
39	Wallace	3	Anæsthetic leprosy.	.....	.....	.....	Improved.	

TABLE E.

Epilepsy.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Czerny	3	Epilepsy.	.....	.....	Ulnar.	Slight improvement	Aura from ulnar nerve. No improvement, except that pot. brom. now had a good effect.
2	Gillette	3	Congenital epilepsy.	.....	.....	Median and ulnar.	Great relief.	The attacks diminished in frequency (from 90 to 18 monthly) and in severity. Aura disappeared. Temporary paralysis in region of ulna.
3	Morton	22 m. 40	Reflex epilepsy.	10 years.	.....	Brac. plexus.	Improved.	Aura. No loss of consciousness.
4	Nussbaum	78 m.	Reflex epilepsy.	.....	.....	Tibial and peroneal.	Cured.	Accompanied with club foot.

TABLE F.

Diseases of the Nerve-Centres.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Bastian	21 m. 39	Loc. ataxia.	3 years.	.....	Both sciatics.	Improved.	
2	Benedikt	64	Loc. ataxia.	.....	.....	Sciatic.	Improved.	
to 4	Benedikt	64	Loc. ataxia.	.....	.....	Sciatic.	Improved.	
5	Surry Bienz	79 m. 33	Loc. ataxia.	.....	.....	Left sciatic.	Died.	
6	Carafy	11 m. 48	Loc. ataxia.	3½ years.	... .	Sciatic.	Improved.	

Diseases of the Nerve-Centres.—Continued.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
7	Czerny 38	m.	Myelitis by compression.	.....	.....	Both sciatics.	Aggravated.	Patient had Pott's disease.
8	Czerny	m.	Hemiplegia, with contracture.	From infancy.	.....	Brachial plexus.	Failed.	
9	Boldt	.....	Loc. ataxia.	Several years.	.....	Sciatic.	Temporary relief.	See Appendix.
10	Boldt	.....	Loc. ataxia.	Several years.	.....	Sciatic.	Temporary relief.	See Appendix.
11	Boldt	f. 45	Loc. ataxia.	12 years.	.....	Ant. crural.	Per. relief.	See Appendix.
12	Boldt	50	Loc. ataxia.	8 years.	.....	Ant. crural.	Per. relief.	See Appendix.
13	Berger 6	.....	Loc. ataxia.	.....	.....	.....	Failed.	
14	Debore&Gillette 20	m. 56	Loc. ataxia.	8 years.	.....	Sciatic.	Improved.	Improvement quite persistent.
15	Debore&Gillette 20	m. 58	Loc. ataxia.	6 years.	.....	.....	Improved.	Improvement quite persistent.
16	Debore&Gillette 20	m. 30	Loc. ataxia.	.....	.....	.....	Improved.	Improvement quite persistent.
17	Erlenmeyer.....20	m. 30	Loc. ataxia.	8 years.	.....	Both sciatics.	Failed.	
18	Esmarch 39	.....	Loc. ataxia.	.....	.....	Brachial plexus.	Great improvement.	
19	Ewart 11	m. 67	Loc. ataxia.	.....	.....	Brachial plexus.	Slight relief.	
20	Fenger 3	m. 54	Loc. ataxia.	2 years.	Dec. 28, 1880.	Both sciatics and crurals.	Improved.	Disease affected upper and lower extremities; pain removed by stretching; bed sores; pyæmia; death six weeks later.
21	Gerster.....22	m. 45	Loc. ataxia.	.....	.....	Both sciatics.	Improved.	
22 to 30	Hahn 44	.....	Diseases of nerve-centres.	.....	.....	.....	No permanent imp.	One death.
	Hahn 44	.....	Diseases of nerve-centres.	.....	.....	.....	No permanent imp.	One death.
31	W. A. Hammond 54	f. 50	Loc. ataxia.	9 years.	Oct. 8, 1881.	Both sciatics.	Temporary imp.	Nerve exposed in lower third in all of Dr. Hammond's cases, and only moderate traction made.
32	W. A. Hammond 54	m. 45	Loc. ataxia.	Several years.	.....	Both sciatics.	Temporary imp.	Relieved for three months.
33	W. A. Hammond 80	m.	Loc. ataxia.	Several years.	.....	Both sciatics.	Great improvement.	
34	W. A. Hammond 80	m.	Loc. ataxia.	2 years.	.....	Left sciatic.	Great imp.	
35	W. A. Hammond 54	f. 35	Ant. sclerosis.	.....	Feb. 17, 1882.	Sciatic.	Temporary imp.	Subcutaneous traction by flexing the thigh on the body.
36	Israel 44	.....	Loc. ataxia.	.....	.....	Sciatic.	No imp.	
37	Israel 44	.....	Loc. ataxia.	.....	.....	Sciatic.	No imp.	
38	G. M. Hammond 54	m. 38	Loc. ataxia.	5 years.	Nov., 1881.	Sciatic.	No imp.	Nerve exposed in lower third.
39	Jewell.....80	.....	Loc. ataxia.	.....	.....	.....	Great imp.	
40	Jewell..... 80	...	Loc. ataxia.	.....	.....	.....	Great imp.	
41	Lamarre 81	m. 66	Cancer of spinal cord.	1 month.	....	Sciatic.	Improved.	Pain over the parts supplied by the sciatic.
42	Larger 5	.....	Loc. ataxia.	.....	.....	.....	Failed.	The only gain was in that morphia, which had been ineffectual before, was now of great relief.
43	Kulenkampff ...58	m. 43	Loc. ataxia.	.....	.....	Both sciatics.	Aggravated.	
44	Küster 15	m.	Loc. ataxia.	.....	.....	Both sciatics.	1st, imp.	
45	Küster 15	m.	Loc. ataxia.	.....	.....	Both sciatics.	2d, no imp.	
46	Langenbeck 70	m. 40	Loc. ataxia.	.....	.....	Both sciatics.	Improved.	Two operations followed by great improvement. Died from chloroform in third operation. Post-mortem showed no lesion of the post. col. of the spinal cord.
47 to 51	Langenbeck 15	.....	Loc. ataxia.	.....	.....	Sciatic.	Improved.	
	Langenbeck 15	.....	Loc. ataxia.	.....	.....	Sciatic.	Improved.	
52	Marshall 21	m. 40	Loc. ataxia.	.....	.....	Both sciatics.	Great imp.	
53	Massing 82	m. 37	Chronic myelitis.	8 years.	.....	Both sciatics, L. crural.	Improved.	Sensation returned after the elongation.
54	Morton 22	m. 64	Chronic myelitis.	17 years.	Sept. 18, 1881.	Left sciatic.	Temporary relief.	Return of sensation immediately after operation; cessation of pain; relapse after four months.
55	Morton	m.	Athetosis.	From infancy.	Nov. 16, 1881.	Ulnar and median.	Improved.	Nov. 25, hand quiet for first time in the patient's memory. Jan. 25, 1882, improvement still persists.
56	Morton	m. 43	Paralysis agitans.	6 years.	Oct. 18, 1881.	Sciatic.	Great improvement.	Nerve dirty brown color, hard, and creaking under 40 lbs. traction. Feb. 1, 1882, walking improved; rigidity nearly gone.
57	Morton	m. 50	Lat. sclerosis.	10 years.	.....	Both sciatics.	Improved.	Two operations, June 11 and October 11, 1881.
58	Nicaise 20	f. 39	Hemiplegia, with contracture.	1 year.	.....	Left sciatic.	Failed.	
59	Nussbaum 83	m. 35	Traumatic myelitis.	11 years.	.....	Both crurals and sciatics.	Improved.	Spasms ceased, but paralysis persisted.
60	Remak 44	m. 30	Loc. ataxia.	.....	.....	Both sciatics.	No imp.	
61	Socin 3	m. 33	Loc. ataxia.	.....	.....	Both sciatics.	Improved.	Two operations; died four days after the second from multiple embolism, due to popliteal thrombus.
62	Sonnenberg....44	m.	Loc. ataxia.	.....	.....	Right sciatic.	Temporary imp.	Two days after operation, motion returned; anæsthesia and girdle pains disappeared; walk improved; relapsed after five weeks, when he fractured his patella; a temporary improvement again occurred.
63	Spencer 84	.....	Loc. ataxia.	15 years.	July 7, 1881.	Left sciatic.	Temp. imp.	
64	Osborn 22	m. 64	Loc. ataxia.	17 years.	Aug. 4, 1881.	Right sciatic.	Improved.	

Diseases of the Nerve-Centres.—Continued.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
65	Southam.....68	m. 51	Loc. ataxia.	3 years.	July 18, 1881.	Left sciatic.	Improved.	Lightning pains relieved; girdle pains and ataxic gait not improved.
66	Southam.....	m. 35	Lateral sclerosis.	.....	July 13, 1881.	Left sciatic.	Improved.	No return of pain six weeks after operation.
67	Tiersch.....85	m. 35	Spastic spinal paralysis	6 years.	.....	Both sciatics.	Temporary imp.	Very forcible stretching; improvement for fourteen days.
68	Tiersch.....	m. 28	Loc. ataxia.	4 years.	.....	Both sciatics.	Temp. imp.	Relapsed after three weeks.
69	Tiersch.....	m. 49	Loc. ataxia.	20 years.	.....	Both sciatics.	Temp. imp.	Relapsed after four months
70	Tiersch.....	m. 45	Loc. ataxia.	.....	.....	.....	Temp. imp.	
71	Wyeth 22	.....	Loc. ataxia.	7 years.	Sept., 1881.	Both sciatics.	Improved.	
72	Riedel.....98	.....	Injury to spine and cord	.....	.....	Both sciatics and crurals.	Improved.	Both sciatics and crurals were stretched at one sitting; sensibility and reflexes returned; locomotion improved.
73	Billroth 99	m. 29	Multiple sclerosis.	1 year.	July 14, 1881.	Both sciatics.	Slight improvement.	Patient did not rally from the operation: œdema of the lungs set in, and he died on the tenth day. A post-mortem examination showed spots of sclerosis in the brain and cord, especially in the region of the medulla; marked œdema of the lungs. Billroth thinks that the death was caused by the shock to an already-diseased central nervous system by the very forcible and repeated (ten times in each direction) traction upon both sciatics.
74	Mikulicz.....99	m. 46	Loc. ataxia.	16 years.	June 21, 1881.	Right sciatic.	Temp. imp.	Relapsed after four weeks.
75	Mikulicz.....	m. 44	Loc. ataxia.	6 years.	June 29, 1881.	Right sciatic.	Temp. imp.	
76	Mikulicz.....	m. 48	Loc. ataxia.	5 years.	June 16, 1881.	Right sciatic.	Temp. imp.	Relapsed after four months.
77	Mikulicz.....	m. 42	Loc. ataxia.	5 years.	July 5, 1881.	Both sciatics.	Temp. imp.	In these cases of Dr. Mikulicz, the effect of nerve-stretching was not the same as regards all the symptoms. The *ataxic* symptoms were unchanged in five cases; once there was a slight improvement, and twice the ataxia was increased. *Sensation* was not improved in four cases; in two there was temp. imp., and in two improvement persisted over three months. The symptoms referrable to the bladder and rectum were, in two cases, improved; in one case impotency was removed; in one case paralysis of the bladder supervened upon the stretching. In all the cases the "lightning pains" were relieved for a longer or shorter time.
78	Mikulicz.....	m. 50	Loc. ataxia.	.....	July 23, 1881.	Both sciatics.	No imp.	
79	Mikulicz.....	m. 45	Loc. ataxia.	3½ years.	Aug. 2, 1881.	.....	Slight imp.	
80	Mikulicz.....	m. 39	Loc. ataxia.	2 years.	Aug. 2, 1881.	Both sciatics.	Improved.	
81	Mikulicz.....	m. 40	Loc. ataxia.	5 years.	Sept. 4, 1881.	Both sciatics.	Improved.	

TABLE G.

Traumatic Tetanus.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1	Ashhurst.....34	.....	Traumatic tetanus.	.....	.....	Median and mus. spinal.	Failed.	
2	Bardeleben	.....	Traumatic tetanus.	.....	.....	Sciatic.	Failed.	
3	Clarke.....86	f. 24	Traumatic tetanus.	.....	.....	Sciatic.	Cured.	
4	Cowper..... 3	.....	Traumatic tetanus.	.....	.....	.....	Failed.	
5	Drake.....87	m. 28	Traumatic tetanus.	.....	.....	Sciatic.	Temporary imp.	Calabar bean used. Convulsions ceased for three days after stretching, then recurred. Died on twelfth day.
6	Fenger 3	m. 29	Traumatic tetanus.	.....	July 15, 1880.	Ulnar, radial, mus. spinal.	Failed.	Elbow crushed. Tetanus six days later. Arm amputated in middle of humerus and nerve stretched in the amputation wound. Next day paroxysms increased in frequency, and the patient died at night. No benefit from stretching.
7	Fenger	m. 43	Traumatic tetanus.	.....	July 11.	Median, ulnar, int.	Cure.	A rusty nail punctured palm of right hand. Four days later trismus and opisthotonos. Nerve stretched 14 days after injury. Immediate relief. Trismus and tetanus disappeared after four days. Paralysis of median and ulnar for 7 mos. Hyperæsthesia on dorsal side of 3d and 4th fingers for 3 weeks. Recovery. Calabar bean and chl. hy. also used.

Traumatic Tetanus.—Continued.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
8	Fenger	m. 55	Traumatic tetanus.		August 5.	Brachial plexus.	Slight relief.	Left forearm crushed. Amputation in lower third of humerus. Two days later paroxysms of pain, trismus and opisthotonos. Axillary plexus above clavicle stretched; but little relief. Two days later wound opened and nerves divided. Pain and opisthotonos stopped entirely for thirty-six hours. Relapse and death after two days.
9	Hahn 44		Traumatic tetanus.				Failed.	In one case the ulnar was stretched; in two cases the sciatic and crural were stretched.
10	Hahn 44		Traumatic tetanus.				Failed.	
11	Hahn 44		Traumatic tetanus.				Failed.	
12	Heath 88		Traumatic tetanus.				Died.	
13	Helmuth 89		Traumatic tetanus.					
14	Helmuth 89		Traumatic tetanus.					
15	Hutchinson 90	m. 22	Traumatic tetanus.	7 days.		Sciatic.	Died.	Relieved of pain.
16	Johnston 80		Traumatic tetanus.				Died.	
17	Klamroth 91		Traumatic tetanus.				Cured.	
18	Klin and Knie .. 1		Traumatic tetanus.	8 days.		Brachial plexus.	Died.	
19	Köcher 92	m. 45	Traumatic tetanus.	14 days.		Post tibial.	Died.	
20	Küster 15		Traumatic tetanus.			Crural.	Failed.	
21	Langton 3		Traumatic tetanus.				Died.	
22	Morris 29	child 7	Traumatic tetanus.	1 day.		Sciatic.	Died.	
23	Nankiwell 2		Traumatic tetanus.			Median.	Died.	One man was 25 and the other 42 years of age. The disease had existed 16 days and 8 days respectively.
24	Nankiwell 2		Traumatic tetanus.			Median.	Died.	
25	D'Ollier 93	m. 54	Traumatic tetanus.			Median.	Cured.	
26	Omboni 20		Traumatic tetanus.			Sciatic.	Died.	One case was a child of 7 years.
27	Omboni 20		Traumatic tetanus.			Sciatic.	Died.	
28	Owens 20	child 6	Traumatic tetanus.			Brachial plexus.	Died.	
29	Pepper 94		Traumatic tetanus.			Median radial.	Died.	Relieved for 2 days; died on third day.
30	Ramschoff 95	child 13	Traumatic tetanus.	11 days.		Post tibial.	Cured.	Calabar bean given four days with no effect. Stretching was followed by relief and gradual recovery.
31 to 34	Ratton 20		Traumatic tetanus.				1 cure. 3 deaths.	
35	Schneider 20	m.	Traumatic tetanus.				Died.	Five elongations.
36	Smith 88	m. 54	Traumatic tetanus.			Median.	Cure.	
37	Schede 82		Traumatic tetanus.				Failed.	
38	Sonnenberg 82		Traumatic tetanus.				Failed.	
39	Thomas 96	m. 23	Traumatic tetanus.			Median.	Died.	
40	Verneuil 80		Traumatic tetanus.			Ulnar and median.	1 died.	
41	Verneuil 95		Traumatic tetanus.			Ulnar and median.	1 cured.	
42	Vogt 3		Traumatic tetanus.			Brachial plexus.	2 cured.	One case injured palm of hand. On 4th day tetanus developed and increased; on 22d day the nerves of brachial plexus, which were tender on pressure, were stretched centripetally and centrifugally; the sheath was reddened and freely opened; immediately after operation the spasms ceased; he could open mouth and protrude tongue; ten days later, discharged cured.
43	Vogt 3		Traumatic tetanus.			Brachial plexus.	1 died.	
44	Vogt 3		Traumatic tetanus.			Brachial plexus.		
45	Watson 2	m. 16		3 days.		Brachial plexus.	Died.	
46	Watson 2	m. 35		2 days.		Brachial plexus.	Died.	
47	B. Watson	m.	Traumatic tetanus.				Died.	
48	Weir	m. 11	Traumatic tetanus.	1 day.		Ulnar.	Failed.	See Appendix.
49	Weir	m. 29	Traumatic tetanus.	1 day.		Post tibial.	Relieved.	See Appendix.
50	Wheeler 97		Traumatic tetanus.					

TABLE H.

Diseases of the Optic Nerve.

No. Case.	Operator.	Sex and Age.	Disease.	Duration of Disease.	Date of Operation.	Nerve Stretched.	Result.	Remarks.
1 to 7	Kummel 22		Neuritis and atrophy of optic nerve.			Optic nerve.		Two cases of neuritis, slightly improved.
	Kummel 22		Neuritis and atrophy of optic nerve.			Optic nerve.		
8	Wecker 20					Optic nerve.		Results not yet published.

The following letter from the distinguished Professor F. von Nussbaum was received at too late a date to be made available in the tables. I give the letter in full with its summary of fifty-two cases:

"MUNICH, May 23, 1882.

"DEAR SIR: With the kindest regards I inform you of the results of my operations in nerve-stretching.

"I.—I have stretched the sciatic thirty-five times. Six of these operations were done subcutaneously. The operation was done eleven times for tabes dorsalis, with very good results. Twenty-four times on account of neuralgia (twenty times with good effect, and four times with but little benefit).

"II.—I have stretched the intercostal nerves once in a case of neuralgia. The result was excellent for a time, but after six months relapsed.

"III.—In reflex epilepsy I have operated eleven times, always with very good results.

Five times the brachial plexus was stretched.
Four " " sciatic nerve " "
Once " tibial " " "
" " ulnar " " "

"IV.—Three times I have stretched the supra-orbital and infra-orbital nerves for neuralgia. The results were good. I have not, however, often made this operation, because I have always had most excellent results after resection of the supra-orbital, infra-orbital, lingual, and inferior maxillary nerves. In twenty-seven years I have made 242 resections of these nerves.

"V.—I have twice stretched the facial nerve in cases of clonic spasms. But little benefit resulted from the operations.

"Receive my compliments and the kindest regards of

"PROF. DR. T. RITTER VON NUSSBAUM,
"*Surgeon-General, Bavarian Army.*"

It is gratifying to observe that the addition of such a large number of cases does not change, but rather confirms the conclusions already reached as to the efficacy and proper sphere of the operation.

Bibliography.—(1) Pooley, in N. Y. Med. Rec., Aug., 1880. (2) Lancet, 1878, pp. 905, 311, 229, 263 and 304. (3) Journal of Nervous and Mental Diseases, N. Y., April, 1881. (4) Bull. et Mem. de la Société de Chirurgie, 1880. (5) La France Médicale, Jan. and March, 1882. (6) Le Progrès Médical, March 18, 1882. (7) Brit. Med. Jour., 1880, p. 921. (8) Med. Rec., N. Y., Sept. 28, 1878. (9) Glasgow Med. Jour., Feb., 1881. (10) The Practitioner, June, 1877. (11) Lancet (Am. reprint), March and April, 1882. (12) Deutsche Med. Wochs., No. 19, 1880. (13) Th. de Nicholas, 1881, pp. 39 and 31. (14) Deutsche Klin. Wochens., 1880, No. 40. (15) Berlin Klin. Wochens., March, 27, 1882. (16) Berlin Klin. Wochens., 1880, p. 258. (17) Hosp. Tidende, 1878, 44. (18) Lancet, 1878, No. 6. (19) Thèse de Scheving, p. 34. (20) Revue de Chirurgie, March, 1882, 228. (21) Brit. Med. Jour., 1881. (22) Med. Rec., March 4, 1882, and April 8, 1882. (23) Lancet (Am. reprint), July, 1881. (24) Chauvel Archiv de Med., 1881, vol. ii., p. 82. (25) Acad. de Médicine, Dec. 13, 1881. (26) Centralblatt für Med. Wissen., 1873, p. 254. (27) Med. Rec., N. Y., Aug. 14, 1880, pp. 172 to 175. (28) Lancet, Feb. 14, 1880, p. 48. (29) British Med. Jour., 1879. (30) Lancet, 1879. (31) Lancet (Am. rep.), 1880, April, p. 358. (32) Deutsch Med. Wochens., 1880, No. 19, p. 258. (33) Sullo Stiramento dilli Nervi, Messina, 1880. (34) Phila. Med. Times, Feb. 11, 1882. (35) Brit. Med. Jour., 1880, 969 and 1,009. (36) Lancet, June, 1875, p. 883. (37) Lancet, 1876, i., 17. (38) Archives für Psychiatrie, x., 1879, p. 284. (39) Deutsche Med. Woch, No. 5, 1880, and No. 19, 1880. (40) Bull. et Mem. de la Société de Chir., iv., 1878, p. 773. (41) Finkalakares, Handb., xx., 1878, p. 278. (42) Med. Record, N. Y., Aug. 13, 1881, p. 180. (43) Hayem's Revue des Scien. Med., 1877, p. 285. (44) Berlin Klin. Woch., April 3, 1882. (45) Berlin Klin. Woch., April 19, 1880. (46) Corresp. für Schweizer. Aerzte, Nov., 1879, 324. (47) Berlin Klin. Wochen., 1880. (48) Petersburg Med. Wochen., Dec., 1878. (49) Petersburg Med. Wochen., 1879, No. 49. (50) Soc. de Chirur, Nov. 9, 1881. (51) Louisville Med. News, Feb. 4, 1882. (52) Thesis de Scheving, 1880, p. 25. (53) Die Nervendehnung, 1877, Leipzig. (54) Letters and Communications. (55) Soc. de Chir., Nov. 1881. (56) Edinb. Med. Jour., 1879 and 1880, p. 210. (57) Weiner Med. Woch., 1880, No. 40. (58) Berlin Klin. Woch., 1881, No. 48. (59) Am. Jour. Med. Sciences, 1878, p. 150. (60) Bayer aerztl Intellig. Blatt, xxx., 1878, p. 558. (61) Ann. de Med. et Chir., Milan, 1880. (62) Berlin Klin. Woch., 1874, 22. (63) Berlin Klin. Woch., 1878. (64) Am. Jour. Med. Sciences, Jan., 1882, p. 288. (65) Chauvel, Arch. de Med., 1881, p. 720. (66) London Med. Gaz., 1880. (67) Brit. Med. Jour., 1880, ii., p. 840. (68) Lancet (Am. reprint), Nov., 1881, p. 437, also Dec., 1881. (69) Boston Med. Jour., 1880. (70) Berlin Klin. Woch., 1879, p. 684 and 709. (71) Hospital Tidende, 1878, p. 45, also No. xlv. (72) Deutsche Zeits. für Chirurg., 1872, p. 462, also Sept. (73) Archives de Medicin., 1878, vol. i., p. 32. (74) Lancet (Am. reprint), April, 1881. (75) The Brain, 1880, p. 117. (76) Correspon. für Schweizer. Aerzte, 1880, p. 137. (77) Phila. Med. Times, April 8, 1882. (78) Die Chirurg. Klinik zu München, 1875. (79) Deutsche Med. Zeitung, 1881, No. 1. (80) Jour. Nervous and Ment. Dis., July, 1881. (81) Revue de Chir., 1881, p. 493. (82) Petersburg Med. Woch., iii., 1878, p. 281. (83) Klin. Mittheilingen, München, 1876. (84) Brit. Med. Jour., Jan. 28, 1882. (85) Boston Med. Jour., March 2, 1882. (86) Glasgow Med. Jour., July, 1879. (87) Canada Med. Jour., July, 1879. (88) Med. Times and Gaz., 1880, pp. 484 and 216. (89) Homœopathic Times, N. Y., 1879 and 1880, vii., p. 112. (90) Med. Times and Gaz., 1879, p. 678. (91) Deutsche Med. Woch., 1878. (92) Schweizer Aerzt. Corresp., 1876, pp. 17 to 20. (93) Le Progrès Med., Feb. 26, 1881. (94) Am. Practitioner, March, 1881. (95) Cincinnati Lancet and Clin., 1879. (96) Bull. and Mem. Soc. de Chir., 1879, p. 173. (97) Brit. Med. Jour., Dec. 17, 1881. (98) St. Louis Clin. Rec., Feb., 1882. (99) Nervendehnung bei Erkrankungen des Rückenmarkes, von Dr. N. Weiss and Dr. J. Mikulicz.

APPENDIX.

The following cases have not appeared in any of the medical prints and are appended to this paper:

CASE I.—Operated on by Dr. Wm. Pierson, Jr., Orange, N. J., and reported by Dr. George O'Gorman, House Surgeon at St. Michael's Hospital, Newark, N. J.:

An Irishman, aged thirty-nine, strained himself by lifting, and has ever since (three months before admission) had a severe pain in his leg. In the hospital, varied treatment by blisters, pot. iod., quinine, morphia, etc., was of no avail. On June 30th, eight

months after admission, Dr. Pierson cut down upon the sciatic in its upper part. The nerve was thoroughly stretched in both directions and the wound closed. There was a slight amount of inflammatory action about the wound, but it was easily controlled. The pain ceased gradually (two or three days) after the operation and has never since returned. A little stiffness of the limb followed the stretching, but it passed away after two or three weeks.

Dr. Carl Buttner kindly furnished the details of two cases of sciatica.

CASE II.—A man, aged forty, was admitted to Memorial Hospital, Orange, N. J., June 17th. He had been afflicted with the disease eight months, and had received the usual varieties of treatment, but without success.

June 17, 1881.—The right sciatic was exposed and moderately stretched in both directions. Ten days later he left the hospital and has remained well ever since.

CASE III.—Dr. Buttaer's second case was a German, aged thirty-six. The disease had existed for eight years, and for the last two years he had been entirely unable to work. The right sciatic was stretched on December 17, 1881. The sheath of the nerve was highly congested, but the nerve itself was of normal whiteness. No adhesions were found. Greater traction was made than in the previous case, and the elongation was so great that the loop of the nerve protruded beyond the lips of the wound. The wound healed readily, the pain ceased, and the patient has been perfectly well ever since.

CASE IV.—Dr. Dougherty, Newark, N. J., operated on a case sciatica at the Soldiers' Home in Newark. Partial relief only was obtained, and a second operation is contemplated to complete the cure.

CASE V.—Dr. D. Hayes Agnew, of Philadelphia, reports two cases of neuralgia, in one of which the sciatic nerve, and in the other the median nerve was stretched. In both cases only temporary relief followed the operation.

CASE VI.—Dr. W. A. Hammond, through the courtesy of his son, Dr. G. M. Hammond, furnished me with nine cases, seven of which were hitherto unpublished. Four were cases of sciatica of several years' duration, accompanied with atrophy of the limb. The sciatic was stretched, and a permanent cure followed in all cases. Four were cases of locomotor ataxia. Two were greatly relieved; one was temporarily benefited, and the fourth received no benefit; the symptoms were aggravated after the operation. One case of antero sclerosis received temporary benefit from the elongation of the sciatic. Dr. Hammond has always exposed the nerve at junction of upper and middle third of the thigh, and made traction in both directions enough to elongate the nerve about one inch. He regards the operation as of "considerable value."

CASE VII.—Dr. G. M. Hammond reports a case of locomotor ataxia of five years' duration. The sciatic was stretched in the lower third. There has been no improvement up to the present time—five months after the operation.

Dr. R. F. Weir, of New York (through his house-surgeon, Dr. F. N. Townsend), reports two cases of tetanus in one of which the post tibial was stretched, and in the other the ulnar. In one case slight relief was afforded, though both cases terminated in death.

CASE I.—Michael Cody, aged twenty-nine. July 15, 1879, patient admitted for small lacerated wound of foot, received twenty-four hours before. Full Lister used.

July 21st.—Complains of stiffness in muscles of neck and jaws; can with difficulty open mouth; wound looks well.

Treatment.—Chloral hydrate in large doses.

July 22d.—Frequent and violent tetanic spasms; tonic in character.

Operation.—Posterior tibial nerve stretched under full Lister. Several hours after operation, seemed easier; spasms fewer in number.

10 P.M.—Breathing rapid, pulse feeble; patient in an unconscious condition, and at 3 A.M. of July 23d died in a spasm.

CASE II.—Henry O'Neill, aged eleven. July 7, 1881, patient received a wound on the hypothenar eminence while shooting blank cartridges with a toy pistol. Wound healed rapidly. Last night (July 11th) was seized with severe convulsions, patient being conscious but with pain in neck. On admission had spasms, with trismus and opisthotonos, and cyanosis.

July 12th.—*Operation.*—Esmarch's bandage and full Lister used; ulnar nerve stretched. No effect from operation on frequency or severity of spasms, and, at 10.30 P.M., patient died in severe spasm.

The following letter from H. J. Boldt, M.D., contains his notes of six cases:

"CASE I.—J. S——, aged forty-five. Tabes dorsalis, second stage, the disease dating back about six years. Patient has severe lancinating pains, radiating from the origin of the lumbar nerves, down the thighs and legs, epigastric region, and abdomen. At times the pains were so severe that the patient cried. All the usual remedies having been tried without any benefit, the sciatic nerve was stretched by Dr. Wm. A. Hammond, at the University Medical College Clinique. The patient was much relieved after the operation, and *walked* home from the college, a distance of nearly three miles, without the least fatigue. He remained free from the pains (ataxic gait remaining) for about three months, when gradually his former condition appeared again, and he is at present suffering as much as prior to the operation, *i.e.*, about one year ago.

"CASES II. and III.—Operated upon by me. Have taken a similar course. The disease and severity of them were the same as in Case I. (Nerve stretched, sciatic.)

"CASE IV.—Mrs. S——, wife of Case I., aged forty-five. Third stage of locomotor ataxia. Disease dates back about twelve years. The patient has not been able to leave her bed for over three months; pains excruciating; she could not bear the slightest touch on the abdomen or anterior part of the thighs. All remedies having failed, I resorted to the stretching of the anterior crural nerve. Results were satisfactory, and remained so as far as the pains were concerned; otherwise a failure. (I believe that this was the first time the operation was performed in New York for tabes.)

"CASE V.—W. M——, aged fifty. Second stage locomotor ataxia, disease dating back about eight years. Suffered the usual pain, and had accompanying disturbance of bladder. Stretched anterior crural nerve, with result of immediate subsidence of the pain and bladder symptoms, ataxic gait remaining. Whether the relief of pain is permanent I am unable to say, not having heard from the patient for over eight months.

"CASE VI.—Mrs. H——, aged twenty-six, has been suffering with pains in her left hip, thigh, and leg

about two years. Suddenly, the pains increased so much in intensity that she was unable to bear the slightest movement; to use her expression, 'I am suffering the pains of hell continuously.' For four days I tried to relieve by different measures, but without effect; she was rapidly losing ground. At the same time a very severe cough set in, which was purely reflex. Stretched the anterior crural nerve on the affected side, and from that time the patient was free from all pain and cough, and continued so.

"From the above cases I come to the conclusion that the stretching of nerves is only to be advised for the relief of symptoms, and then the result is variable. In my opinion the stretching of the anterior crural nerve is of more benefit in cases of tabes than the sciatic. The force used on the anterior crural was from fifteen to twenty pounds. The sciatic was stretched in my cases in the lower third of thigh.

"Very truly yours,

"H. J. BOLDT.

"TO DR. CHANDLER."

Progress of Medical Science.

LESION OF THE ISLAND OF REIL.—An interesting case is given by Bourneville and Bonnaire, in which a man, aged thirty-four, was suddenly seized with left hemiplegia (*Archives de Neurol.*, No. 8). The attack took place twenty years before his admission into Bicêtre. Six years after the paralytic seizure the patient became subject to epileptic attacks. When the man came under observation he was suffering from left hemiplegia, with contracture; the arm and leg were a good deal wasted, and there was a perforating ulcer on the sole of the left foot. The tendon-reflexes on the paralyzed side were much exaggerated, and there was spinal trepidation. There was no disorder of sensibility, but the intellect was much impaired. The necropsy showed, on the right side, atrophy of the posterior part of the third frontal convolution, of the two ascending convolutions of the globule of the gyrus angularis, and of the entire island of Reil. The first and posterior parts of the second temporo-sphenoidal convolution were also involved. The island of Reil was replaced by a kind of gelatinous membrane of reddish color. The parts above named were simply atrophied, and presented no change of color. The right corpus striatum and optic thalamus were considerably reduced in volume. Secondary descending degeneration was visible to the naked eye in various regions through which the pyramidal tract passed.

CALCULUS OF THE BLADDER IN AN INFANT.—Dr. J. W. Troitzky relates, in *Wratsch*, No. 37, 1881, the case of a child, one month old, which was brought to him with the following history: In other respects perfectly healthy, it cried loudly, about twice a week, on attempting to pass urine. The mother accidentally discovered that the flow of urine became free, and the child was relieved, when she held its pelvis and feet higher than the head. It first cried during micturition when it was eight days old. Twenty-four hours before Dr. Troitzky saw the child the difficulty had returned and could not be removed by the usual manœuvre; the flow of urine was quite arrested. The bladder was distended with urine, and a calculus was detected in the urethra, about the middle of the penis. All attempts to remove it were fruitless. Dr. Troitzky then injected a few drops of almond-oil into the urethra, and easily pressed the stone toward the orifice; after the dilatation of which, the calculus was removed. It weighed a quarter of a gramme (nearly four grains), was eight millimetres long and four wide, and consisted of urates arranged in layers. The urine contained an abundance of crystals of uric acids and urates. The formation of the calculus must have commenced during intra-uterine life. The child's parents were healthy; the grandfather on the father's side had suffered from calculus.

TREATMENT OF INFANTILE PURULENT PLEURISY.—Dr. Martial Durand has communicated a very complete study on this subject to the Society of Medicine and of Surgery of Bordeaux, which terminates in the following conclusions: 1. Aspiratory puncture, either simple or followed by injections, is a bad method of treatment, of which the duration is frequently much prolonged, and which scarcely ever dispenses with the necessity of having recourse to other means. 2. The method of treatment by drainage-tubes, and especially by Potain's siphon, has almost all the inconvenience of pleurotomy, since it does not thoroughly preserve from the entrance of air, without having its advantages, since it does not allow the exit of the intra-pleural detritus. 3. M. Durand believes that the objections to the entrance of air into the pleura have been much exaggerated. It does not seem to him that this is dangerous if the pus flow continuously, and if the air be not imprisoned. 4. The operation for empyema seems to him to be the best of methods when the diagnosis is very clear. With this proceeding, the disease is, perhaps, less prolonged, but it is desirable that this operation should be made use of before the patient has fallen into a state of cachexia. The operation gives good results, and would give better if the general condition were good, and with the use of antiseptic methods.

RENAL CALCULUS IN CHILDREN.—The occurrence of renal calculus in children, Dr. Eustace Smith thinks to be more frequent than is usually supposed. Uric acid is the commonest constituent of the concretion. This proteid derivative is often excreted in excessive quantity; an apparent increase in the amount being due to a diminished secretion of water, or an increased acidity of the urine, while a real excess frequently results from large quantities of food, or increased tissue-metabolism. This tendency to lithic acid formation may be hereditary, as in the gouthy diathesis, and all conditions that interfere with the assimilative processes tend to a precipitation of uric acid in some part of the urinary apparatus, either as infarctions in the tubules of the pyramids, or in the pelvis of the kidney. Besides uric acid, oxalate of lime concretions are not uncommon in children; and sometimes small calculi of urate of ammonia or soda, occasionally a nucleus of uric acid, may be encrusted with urates or phosphates, the latter indicating the existence of vesical irritation. Urine that may be thick from lithates is passed without any distress to the child; but excess of uric acid determines frequency of micturition, signs of pain in the urethra, and very often nocturnal incontinence, while the passage of the sharp crystals along the renal tubules is a frequent cause of hæmaturia. Indeed, this latter symptom in children is usually to be attributed to the cause under consideration. Examination of the urine in these

cases often gives a negative result. Calculus may exist in the kidney without giving rise to symptoms of any kind. Between the attacks of hæmaturia, the urine may contain neither blood nor albumen, and, unless uric acid be actually passing, it may redden litmus paper but faintly. Sometimes the irritation produced by the presence of the calculus in the pelvis of the kidney may set up pyelitis, the stone then usually becoming enlarged by deposition of phosphates upon its surface. The passage of the concretion along the ureter seems to be attended with less pain than in the adult, though serious consequences will follow its impaction, such as contraction of the passage, and even hydronephrosis. While it is far from uncommon for children to pass quantities of uric acid sand, a coincident hæmaturia is by no means so frequent; and this seems due to the fact that the acid is commonly deposited from the urine in the bladder itself, and not at a higher point in the urinary tract. In the case of children, it may be laid down as a rule that renal hemorrhage, occurring in a child otherwise healthy, and accompanied by no symptoms or by hemorrhage from other parts of the body, is in the majority of cases to be attributed to the irritation of crystalline masses in the tubules, calyces, or pelvis of the kidney. Where there is evident disposition to excessive formation of uric acid, the diet should be light and plain, and the meat and farinaceous constituents carefully proportioned to the digestive powers; alkalies should be given, and, if there be hemorrhage, perfect rest in bed enjoined. Styptics are rarely required.—*London Medical Record*, July 15, 1882.

Multiple Cirrhosis of the Kidneys, Liver, Lungs, Etc.—While carrying out his researches upon primary cirrhosis of kidney in Professor Ostroumoff's clinic, in Moscow, Dr. Langovoi (*Med. Obozr.*, Jan., 1882) met with a series of cases in which, side by side with the affection of the kidneys, there existed similar changes of the heart, liver, lungs, spleen, peritoneum, etc. The author gives a detailed clinical account of four such cases, adding some interesting results of the post mortem examination. The microscope revealed very extensive and profound alterations in the vessels of all organs investigated. They were these: 1. Endarteritis obliterans, which either completely closed or only considerably narrowed the lumen of the vessel; 2. Mesoarteritis, shown by an immense thickening of the muscular coat of the artery; and 3. Periarteritis, with hypertrophy of the adventitia, and formation of dense connective tissue radiating from the vessel in all directions. Besides these vascular changes, the kidney showed great increase of connective tissue, obliteration of the glomeruli, granular disintegration of the epithelium of the tubuli contorti; the liver, intense proliferation of the interlobular connective tissue; the uterus, hypertrophy of the fibrous tissue and atrophy of muscular fibres; the ovaries, cirrhosis, with atrophy of follicles; the spleen, enormous thickening of the trabeculæ, and an infarct with a central vessel containing the organized thrombus; the submaxillary glands, hyperplasia of the connective tissue; the heart, very pronounced increase of connective tissue, and atrophy of the muscular elements, both in the papillary muscles and in the walls; the lungs, compression and narrowing of the alveoli, with great hypertrophy and leucocytic infiltration of the interstitial tissue. Discussing the question whether all those changes simultaneously affecting the organs of all kinds are only accidentally coincident, or produced by a common exciting cause, the author follows the teaching of Sir W. Gull and Dr. Sutton, and attributes the development of multiple cirrhosis of the viscera to primary arterio-capillary fibrosis. He found considerable vascular fibrosis, even where the changes of connective tissue in an organ were only slight and incipient. In his opinion the increase of blood supply, resulting from the beforementioned vascular alterations, necessarily leads to proliferation of connective tissue in the organs affected.

Amyloid Kidney without Albuminuria.—Dr. J. Straus (*L'Union Médical*) has published a paper on the above subject, and submits the following conclusions: 1. In certain cases of amyloid degeneration of the kidneys albuminuria may be constantly absent until death. 2. The absence of albuminuria is due, on the one hand, to the absence of a deep lesion (interstitial or epithelial) of the kidney, and, on the other hand, to a special localization of the amyloid degeneration. This, in such cases, bears chiefly upon the *vasa recta* of the medullary substance, and implicates in a minor degree the glomerular vessels. 3. From a clinical point of view, if in a phthisic or an inveterate syphilitic, or a subject of chronic osseous suppuration, etc., we find enlargement of the spleen and of the liver, but *without albuminuria*, we are not justified on this account in rejecting the idea of amyloid degeneration of the viscera, nor even in absolutely denying amyloid degeneration of the kidneys. 4. Those authors who date the beginning of amyloid degeneration in the economy from the moment at which they observe the presence of albumen in the urine, commit a double error, (*a*) because amyloid degeneration is far from beginning always by invading the kidneys; on the contrary, the spleen and the liver are habitually the first to be attacked; (*b*) because the kidney itself may be suffering from amyloid degeneration without albuminuria being present. It is then necessary to mistrust calculations by which it has been sought to fix the possible duration of life in subjects afflicted with amyloid cachexia, by making this date from the first appearance of albuminuria.

Rupture of the Hepatic Duct.—An interesting case of rupture of the hepatic duct is reported in the *Lancet* (May 6, 1882) by Mr. John Freeland, of Antigua. The patient was a black woman, sixty-five years of age, who had been suffering with intermittent fever, gastric disturbance, and retching. In one of the vomiting spells she experienced great pain, which, being relieved by an opiate, soon returned, and was attended by a tympanitic and tender abdomen. After death, which occurred in collapse about eight hours later, the cavity of the abdomen was found literally filled with blood and bile, the intestines inflamed and gangrenous in spots, and general peritonitis. The gall-bladder was found empty; the hepatic duct was lacerated, and in places contained pouches in which gall-stones were encysted. One of these bags was pervious, and permitted a leakage of bile into the peritoneal cavity, except when obstructed by a gall-stone which it held. This opening had probably existed for years. The former one was surrounded by evidences of recent inflammation, and, without doubt, caused the fatal result. The spleen was deeply stained with bile. The other viscera did not show such decided coloration.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, September 9, 1882.

RECENT LITERATURE OF TUBERCLE.

THOROUGH as have been the experimental investigations of Villemin, Toussaint, Bouley, Bollinger, Klebs, Hugues, Vallin, and other distinguished European scientists whose inquiries have graced the literature of medicine during the last three years, as to the contagiousness of tubercular disease, the mode and vehicle of its propagation, and the possible relation of tubercle in the inferior animals to tubercular phthisis in man—it is still an unsettled issue to what extent the ingestion of meat and milk from tuberculous cattle is concerned in the development of the disease. The question is one of primary interest to the science of public medicine; for, if it were proved beyond a doubt that, under ordinary circumstances, the consumption of meat from tuberculous beeves or sheep, or of milk from tuberculous cows, is capable of producing the disease in man, the result would be an immediate revolution in alimentary hygiene; a revolution whose pecuniary would be hardly less than its sanitary and scientific interest and one of whose direct consequences would be the condemnation of fifteen beeves in every hundred slaughtered for the market, according to competent veterinary authorities, and of fifteen cows in every hundred concerned in the production of our daily milk supply. It is of the highest importance, therefore, that the question should be cautiously handled, the experiments and observations carefully verified, and the ultimate decision one that cannot be reversed or modified. If, as is believed by many able European physicians and veterinarians, the prevalence of tubercular disease in cows concerned in our milk supply, and in animals slaughtered for food, is a leading factor in the propagation for a scourge whose ravages are responsible for fifteen per centum of the deaths recorded by vital statistics; or if, as more moderate scientists are persuaded, it is a subordinate but still a real factor in the etiology of tubercular phthisis, then, whatever may be the pecuniary loss to cattle producers, the condemnation of such animals is of pressing moment to public health, and the legislation thereto essential should be secured without delay. But the fact must be incontestably established by thorough investigation before appealing to the legislature; for it is in the highest degree unlikely that a measure of such unpopularity with a large section of the community, and involving such pecuniary loss to dairymen, would be entertained by a legislative body upon probabilities alone, however imperious and convincing.

In Germany, taking this view of its practical moment, the subject has not been left to the decision of private observers; but the Imperial Minister of Agriculture has appointed a commission composed of pathologists of the highest reputation, with instructions to inquire experimentally into the question, whether the disease can be communicated by milk from tuberculous cows or by meat from tuberculcus cattle, and if so, under what conditions. In France, also, the institution of such a commission by the Minister of Agriculture is agitated, and both the Institute and the Academy of Medicine have the matter under consideration; while some of the ablest memoirs that have marked the literature of tuberculosis have been read before the Academy of Sciences. There is in this country a National Academy of Sciences as well as an American Medical Association, and an Institute (the Smithsonian); but it has not apparently occurred to either to evince concern in a question of greater importance to the United States than to Germany or France, owing to our vast cattle-producing areas and our present and prospective relation to the cattle marts of the world.

It was M. Villemin who first stated that the ingestion of tuberculous matter by healthy animals and its inoculation upon them were capable of specifically reproducing the disease. It was urged, in answer to his assertion, that the introduction of other septic material into the tissues of healthy cattle is capable of determining tubercle; and this was experimentally proved, although the result did not follow the cause with that unerring regularity and certainty which Villemin had described in his paper. Toussaint came to the rescue of his distinguished confrere, by showing that tuberculosis could be produced in pigs—animals very refractory to that disease—by the inoculation of only two cubic centimetres of juice expressed from the muscles of a tuberculous cow. He also caused tuberculosis in the dog, by injecting a few drops of blood from the finger of a phthisical man into the cellular tissue of the animal; and finally determined tubercle in the hog by the ingestion of tuberculous meat and milk. A transcript of his experiments

was read before the Academy of Sciences, and formed the starting-point of the large body of literature that the subject now presents.

The theory that the disease is propagated by a special bacterium present in tuberculous matter, and in the milk, tissues, and fluids of phthisical animals, was first advanced by Professor Klebs, who claimed that he had discovered such a bacterium, and had proved by experiment that, unless it was present in the liquids used for inoculation, the injection of the blood or juices of tuberculous cattle was incapable of causing tubercle. He furthermore declared, in the same remarkable paper, that he had been successful in the cultivation of this organism, according to the method of M. Pasteur, and had succeeded in producing tubercle by inoculating animals with it after such cultivation. This striking memoir, which really anticipated by several years an aspect of the subject that has lately attracted universal attention in the hands of other observers, was productive of no immediate consequences; the statements of the author were doubted in some quarters and denied in others; like most daring innovators, his results, though since verified in important particulars, reacted against the credibility of their author: for it is at exceeding risk of personal prestige that one ventures upon the record of facts subversive of current scientific doctrines. Wherefore, science, having its orthodoxy as rigid in its way as that of theology, it is the habit of many distinguished scientific men to suppress facts when they find them in conflict with prevalent theories. More to the point, though of dubious morality, is the experiment of the three Greek physicians, Deuset, Tareskera, and Zallouis, who inoculated a man with healthy lungs, dying of slow gangrene of the left leg, caused by obliteration of the femoral artery, with a quantity of the sputa of a phthisical patient. The operation was performed on the upper part of the left thigh, and in about three weeks auscultation disclosed a perceptible murmur at the apex of the left lung. The man lived thirty-eight days, then died of the progressive gangrene. The autopsy revealed the presence of twenty-six newly formed tubercles in the upper part of the right lung, and two near the apex of the left.

It would be an unpardonable cumbering of space to review the development given within the last few months to the bacterium hypothesis of the propagation of tubercle first advanced by Klebs, and resuscitated by later investigators after the original paper had apparently been forgotten—resuscitated, too, it may be added, without a passing reference to his work. The best mode of demonstrating tuberculous bacteria has been fully discussed by European microscopists, in articles that have been reprinted here, and are familiar to the medical reader. The facts which seem to be proved are that tubercular disease in animals is contagious; that it is communicable experimentally from the diseased to the healthy animal by the ingestion of meat or milk as well as by that of tubercle itself; that it may be communicated by inoculation with the blood, the tissue juices, or the sputa, as well by means of infusions of tuberculous matter; and that, in a few cases at least, tubercle in man has been traced, with a reasonable degree of certainty, to consumption of the meat and milk of tuberculous cattle.

But little has been done in this country in this aspect of the literature of tuberculosis. Some three years ago a committee consisting of Prof. J. M. Heard, Prof. W. P. Worster, and Prof. F. G. Fairfield, was appointed by President Rawson of the New York College of Veterinary Surgeons, with a view to verify the results of European inquiry and to investigate the special aspects of the subject as presented here. In the report of the commission, which has just been submitted, the results arrived at by European observers are passed over very lightly; but with the qualification that some forms of tubercle are not communicable by inoculation, while others undoubtedly are; in other words, that there are malignant and non-malignant forms of tubercular disease; not to be distinguished from each other, however, by the presence or absence of bacteria—for bacteria are present in both. The investigations of the committee have been specially directed to two important questions: First, whether tuberculous milk and meat can be distinguished from the milk and meat of healthy animals; and, secondly, the origin of tuberculous matter in the animal organism. On the first point, the conclusion is that the milk of tuberculous animals can be distinguished from healthy milk, partly by reference to physical qualities, and partly from microscopic tests. But as respects the meat of tuberculous animals, this is not the case, while, as concerns the blood, the advanced stages of the disease can be identified with tolerable certainty. The committee finds that tubercular disease is marked by a process of cell-decomposition, in which the first step is granulation of the cell contents, and the second rupture of the cell-pellicle and escape of the granular bodies. This decomposition is particularly marked as relates to the colored corpuscles of the blood, involving often as large a proportion as one in every fifteen or twenty, and producing in the later stages a rapidly progressive anæmia. The minute bodies into which the diseased corpuscle is thus resolved are real living organisms, possessing all the activities of protoplastic life, and constitute the germs of the bacteria observed in fully developed tubercle. It is thus credible that the introduction of such germs into the healthy circulation may determine a true tuberculous formation, by determining a true tuberculous condition of the blood; and so

far the inquiries of the college committee sustain the conclusions of Klebs. A tubercle, then, may be defined as the equivalent, actually, not theoretically alone, for a given amount of cell-destruction. More than this, the committee finds from many experiments that the process of granulation above described is the true mode of cell-death in all tissues, animal and vegetable. Thus, while leprosy is marked by one type of cell-degeneration, cancer by another, anthrax by another, and so on, tubercle is distinguished by direct cell-death as a progressive process; and quantitatively considered a given, mass of tuberculous matter is the direct physical equivalent of a given amount of cell-destruction, or rather, of the death of a given number of cells.

The report of the committee is in this particular a strikingly original contribution to the literature of tuberculosis; but it must not be forgotten that the verification of a large body of observers is essential to establish a pathological doctrine of such significance as this, which implies that the minute bacteria associated with various diseases all have a common starting-point in the destruction or metamorphosis of cells; that is, either in the granulation and splitting up of the cell-contents into minute bacterial organisms, or in the transformation of the cell protoplasm as a mass into larger organisms. The first takes place in tuberculous degeneration, the second in the production of anthrax rods.

It is not to our purpose to enter upon any critical analysis of the statements contained in the report. In the nature of things their verification or denial will follow in due season. If subsequent inquiry should establish them, they will take their place as a step in advance in the pathology of tuberculosis; and to time, which tests and sifts all scientific doctrines, their fate must be committed.

DR. BUCKNILL ON THE MENTAL CONDITION OF GUITEAU.

In the current number of *Brain* is an article by Dr. J. C. Bucknill upon the mental condition of Charles Julius Guiteau. Dr. Bucknill has probably no superior in Great Britain as a student of, and expert in, mental diseases. Certainly, no one will be impudent enough to class him as either dishonest or an ignoramus. His opinion, free, as it must be, from any local bias, claims more than usual weight and attention.

It is naturally a source of satisfaction to find that he sides with the general judgment in considering Guiteau to have been sane and responsible. Dr. Bucknill comes to this conclusion after a careful study not only of Guiteau's history and trial, but of the special pamphlets put forth by the gentlemen who believed in his insanity. It will be remembered that these pamphlets have been so numerous as to call to mind very strongly the saying that "error is ever talkative."

In the face, however, of all this argumentation, Dr. Bucknill reaches the conclusion we have mentioned. His article is not a long one, and does not attempt to treat the question exhaustively.

It is shown in the first place, how entirely the American pamphleteers have failed to indicate what form of insanity Guiteau possessed. The futility of attempting to classify it as an example of the "reasoning mania" of Pinel, is abundantly proven, if any proof were necessary. Such careful writers as Folsom and Channing acknowledged their perplexity and furnished no conclusions for criticism to attack.

The stress laid by some experts upon the value of hereditary influence is deprecated by Dr. Bucknill. He even goes so far as to say that for legal purposes hereditary influence might just as well be counted out. It is true that the oft-repeated statement that Guiteau's hereditary history was full of insanity is a violent exaggeration.

It has been insisted that, on a number of occasions, Guiteau was subject to delusions. The attempts to start, and subsequently to buy, a paper are instanced. His inspiration to assassinate the President has also been referred to as a delusion, using the term in its technical sense. Guiteau said, "If the jury believe that I believed I was inspired to remove the President, then they must find me insane—in law, but not in fact." Guiteau's inspirations and delusions, however, were unquestionably, as Dr. Bucknill shows, the outgrowth of his education and character, not of any disease. The inspiration by God to good actions, by the devil to bad actions, is the creed of the Oneida Perfectionists. It was the creed of Guiteau's father, and the one upon which Guiteau had been nursed and nourished.

It was but natural that he should believe so great a deed as the murder of a President to be inspired, just as he had previously believed himself inspired to found a journal.

In conclusion, we would add that the *Journal of Mental Science*, edited by Dr. Tuke, in an editorial review, takes ground similar to that of Dr. Bucknill.

Thus, as we become farther removed from the time of trial, expert opinion is siding with that first expressed by the mass of conservative men. It does not follow, because a nation is excited and aroused, that its feelings are wrong or its judgment incorrect.

THE SHARP SPOON IN SURGERY.

Dr Pfuhl has given an account in the *Deutsche Militärzth Zeitschrift*, of the many uses to which a specially devised spoon with sharp cutting edges may be applied in surgery. This instrument is not unknown to surgeons, and the serrated spoon in particular has been much employed in America for the removal of uterine polypi. Dr. Pfuhl has, how-

ever, studied the capabilities of the sharp spoon more than any one else, and now formulates the indications for its use in a manner that claims the attention of surgeons.

The spoon is not a clean cutting instrument, and it generally leaves some irritation behind. It is painful, and anæsthetics must, as a rule, be employed along with it. It causes considerable hemorrhage also, and, where practicable, Esmarch's bandage is first applied. Its advantages are that morbid tissues can be more perfectly removed. Especially is this the case in malignant growths, in ulcers, and in some forms of skin disease. Upon the skin it is most indicated in chronic torpid ulcers, especially those of the legs. Here the base of the ulcer must be carefully scraped until perfectly healthy tissue is exposed. The hard edges need often to be snipped off with scissors. The after application of a rubber bandage then helps to secure a good result. In scrofulous and syphilitic ulcers and abscesses, the spoon has been used with a most happy effect. The author also recommends it in lupus and epithelioma of the lip. He believes that it cleans the healthy tissue better than can be done by any other method. In such skin diseases as squamous eczema, acne simplex, and sycosis, the spoon is also effectual.

In diseases that affect the deeper layers of the skin, such as furuncles, carbuncles, mammary abscesses, and even in wounds with diphtheritic deposits, Dr. Pfuhl thinks that by the use of the spoon peculiarly good results can be obtained.

In diseases of the glandular organs, such as purulent inflammation of lymphatic glands (buboes, tubercular glands, etc.), the spoon is employed, the whole diseased tissue being thus easily removed.

The application of the sharp spoon to diseases of mucous membranes is not so extensive, still it is of much value in soft cancers, adenoid vegetations, etc.

Bardenheuer has used it in trachoma of the lids. In gynecological practice it may be modified so as to act like a curette. Volkmann and Bardenheuer as well as the author have used the instrument in question in diseases of the bones and joints.

Our author gives evidence quite sufficient to show that the sharp spoon is a useful addition to the armamentarium of the surgeon.

THE VALUE OF SUMMER EXCURSIONS.

The summer is ended, and with it summer excursions will soon be brought to a close. Probably no season has witnessed so many. The seaside and country resorts within a radius of thirty miles have been diligently patronized by crowds of persons compelled to make the city their summer home. Especial efforts have been made to provide the young, the poor, and the sick with fresh air.

A great deal has been said about the sanitary value of these excursions. No one can doubt that the hot and dusty atmosphere of a New York City summer is far from being a tonic. But we think it a good time to start the query whether the daily trips made out of it in the name of health and rest have all the sanitary value claimed for them. We are especially inclined to believe that the much-praised Sunday excursions are, from a sanitary point of view, a humbug. Let doubters make some comparative experiments. On a hot Sunday one takes a crowded car, by which he reaches a more crowded steamer, and, after a crowded ride, is landed at a bustling, noisy hotel. Our excursionist tires himself in trying to find a place to rest, and is further wearied by waiting for an overworked waiter to get him a high-priced dinner. He smokes perhaps; he eats and drinks if he can; and finally crowds his tired way home, reaching it, we venture to say, in nine cases out of ten, vastly more exhausted than the ploughboy of elegiac memory.

This is the dark side of the picture. There are robust frames and happy natures to whom all this is freshness and delight. But we are looking at the excursion as a medicine to the wearied and feeble. For these it has elements which are inevitably injurious. "Crowds kill joy" to many; they kill rest to more. Man becomes easily tired when suddenly thrust into new surroundings. The constant excitation of the senses by novel scenes and crowds of faces makes a drain upon the energies which unconsciously but surely enfeebles them. It is this which counteracts the benefits of cool air and fresh breeze, and which explains the tired feeling that surprises the returning excursionist who has consciously made so little physical or mental exertion. On the very young, a change of environment makes less impression. They are not yet habited to any special routine. But one or two days on the river cannot greatly help an infant. And the way to make a city healthful to this class in the summer is not by floating them once a month down the harbor, nor even by taking them for a few days to the country. This is all very well; but if sanitarians would strike at the root of the matter, they must make the homes and tenements of New York clean and airy and healthful.

THE TOY DESTROYER.

Of the various forces of nature fire seems to have the greatest attraction for boys, and explosive noises seem to be its most fascinating accompaniment. Hence the popularity of the toy pistol. It satisfies the boy's most urgent instincts, and appeases also the lurid fancies excited in him by the penny literature of the streets. With a toy pistol and a five cent novel the boy can easily pose himself as the embryo hero of most thrilling tales.

The peculiar pleasures of this toy, however, are dearly purchased. We recall the injuries and

deaths resulting from its use in London, Baltimore, and this city in particular during the past two or three years. The pistols are cheaply constructed and the explosives are very liable to injure the person firing. Furthermore, the injuries have a marked tendency to induce lockjaw or even a complete tetanus. The records of what toy pistols did in this city on the last Fourth of July were given in THE RECORD (August 26th). There were few public hospitals which did not at that time have some youthful victim of an indiscreet fondness for explosives.

It is quite time that the toy pistol be abolished by law.

Here is an opportunity for the State to protect life with but little trouble. It is its plain duty to suppress what has become a danger as well as a nuisance.

The dangers in its use are being recognized by the public press. A series of cartoons in *Puck* most dramatically illustrates the murderous tendencies of what is sold for a cheap and harmless plaything. Some poetic verses are appended, of which the concluding stanza is most to the point:

"See the little pistol
In the little shop;
See the urchin buy one
With a joyous hop.
See him gaily load it
With a deal of care;
Then see his little head
Flying through the air."

THE EGYPTIAN WAR.

THE preparations for the care of the sick and wounded in the Egyptian war have been very carefully made. The equipments for numerous field hospitals have been furnished and put into use. An Army Hospital Corps of over nine hundred men is already in Egypt and distributed at various posts. A large steamship, the Carthage, has been fitted out as a hospital ship, and accommodations for two hundred and fifty men have been prepared upon her. Surgeon H. Fergusson is in charge with a staff of assistants and four nurses. Her purpose is to transport the wounded to a general hospital at Cyprus or Gozo. Some of the invalids are carried still farther west and left at Malta. A second hospital ship is being fitted out at date of writing.

The medical officers have all been supplied with a pamphlet giving directions as to the special sanitary precautions needed to preserve the health of the troops.

So far, fortune has ordained that most of the sick and wounded should be among the Egyptians, who have no such elaborate arrangements for the care of their unfortunates. The English troops have suffered comparatively little, considering the circumstances about them, either from injury or disease, for a campaign dignified by the name of war. About four per cent. are reported sick.

One of the great dangers to which the soldiers have been exposed has been the endemic hæmaturia of that country. This disease, which frequently afflicts the fellaheen, is produced by drinking the unfiltered water of the Nile. Such water contains an organism *Bilharzia hæmatobia* which is the direct cause of the disease. The English troops, as yet, have escaped any trouble from this source.

A remarkably effective piece of sanitary work deserves mention in connection with the present campaign in Egypt. After the bombardment and capture of Alexandria, and the horrible massacre of its inhabitants, the city was left in a most frightful condition. The dead were unburied, many persons were wounded and sick, and there was a general appearance of ruin and desolation. Numerous dying and dead animals lay about the streets. In addition to it all, the water supply was short. With the hot sun pouring down, there were all the elements present for the generation of a virulent epidemic. Fortunately there were those who understood the danger. A sanitary commission consisting of four local medical men was organized and given authority to act. They at once had the dead buried, large trenches outside the city being used for the purpose. The streets were cleansed, and as the weather was favorable and the water supply increased, no serious amount of sickness took place. We doubt if the value of the work thus done in saving lives has been justly appreciated.

THE YELLOW FEVER EPIDEMIC.

THE fight against yellow fever is being actively waged, and so far has been very like a drawn contest. There has been no great extension of the disease at any single point, while at Pensacola and Matamoras there is a temporary check at least. It has, however, held its own in Texas, and has been thrusting its ugly presence into several new places. At Brownsville the fever has, so far, been kept confined within the cordon. Its activity, however, is not abated at date of writing. The number of cases during the week ending September 4th was 544, with 24 deaths. The total number of cases at this town since the epidemic began is 1,261, with 76 deaths. Thus nearly one-fourth of the whole population has suffered from the disease. The mortality-rate, however, has been surprisingly low. This rate, which in some epidemics reaches 75 per cent., and which rarely falls below 10 per cent., has been at Brownsville only about 6 per cent. As over one-half of the period during which yellow fever epidemics usually last has now expired with no serious extension and no increase in malignancy, we may continue to expect that the country will receive no serious injury from the disease.

Since our last editorial note the fever has appeared in Pensacola, Florida, much to the conster-

nation of that thriving place. The disease is believed to have been imported from Matanzas by the bark Saleto, which arrived July 2d, was quarantined twenty days, then came up to the railroad wharf, and unloaded. On August 10th, the captain and two seamen were sick with the fever. On August 25th, another case was found on board an Italian bark, which had been sixty days in port. A third and fourth case were discovered on another vessel in the harbor. On August 28th, a case was found in the Marine Hospital. It was that of a seaman from a New Orleans vessel, which had arrived two weeks before. Meanwhile eight cases, with one death, had been reported in the city by private physicians. Up to September 2d there were one or two cases reported daily, but the disease seems now to be kept well in hand. There have been in all up to the 4th instant twenty cases, with six deaths—a larger mortality-rate than exists in Texas.

Ten or twelve deaths from yellow fever per week are reported at Havana. Infected vessels have been discovered and quarantined at Boston and Philadelphia. An alleged case of yellow fever was reported as occurring at Lynn, Mass., on the 31st ult., but there was most probably a mistake in diagnosis. The fever is abating at Matamoras.

Reports of Societies.

BRITISH MEDICAL ASSOCIATION.

Fiftieth Annual Meeting, held in Worcester, England, August 8, 9, 10, 11, *and* 12, 1882.

(Special Report for THE MEDICAL RECORD.)

GENERAL SESSION—FOURTH DAY, FRIDAY, AUGUST 11TH.

THE session opened with a discussion upon the

NOTIFICATION OF INFECTIOUS DISEASES.

The point at issue was whether the doctor or the householder should be compelled to notify the authorities upon the occurrence of an infectious disease. The following resolution was at last adopted after much discussion:

"That, in view of the unanimous opinion of all competent sanitary authorities that notification is the indispensable basis of action for arresting the spread of infectious diseases, and of the general testimony as to the satisfactory operation of the Acts which have already been passed by the legislature to make such notification compulsory, this meeting declines to withdraw the approval which the Association has repeatedly expressed in favor of urging Parliament to make the notification of infectious disease generally compulsory, under such conditions as may appear to be, after due inquiry, best calculated to protect the public health."

An amendment was added to this as follows:

"That this meeting earnestly desires compulsory notification of infectious disease, but it wishes to express its opinion that the compulsion to notify should be placed upon the householder as his duty as a citizen, and not upon the doctor."

THE MIDDLEMORE PRIZE

of sixty guineas was then presented by the President, on behalf of the Association, to Mr. William Adams Frost, of London, for his essay upon the "Scientific and Practical Value of Implements in Ophthalmic Medicine and Surgery" made or published within the past three years.

DR. HUMPHREY, of Cambridge, on behalf of the Collective Investigation Committee, reported organization and progress.

DR. WADE, of Birmingham, brought up the report of the

SCIENTIFIC GRANTS COMMITTEE.

During the year the sum of £225 had been expended in helping on scientific researches. The money had been distributed among twelve persons, in sums of from £10 to £25.

Among the reports already made or preparing are the following:

Dr. Thin has been engaged in "Investigations on Methods for Showing the Presence of Bacteria in Epidermic Structures." He has found confirmatory evidence of the existence of a bacterial organism in the hairs in alopecia areata. In his further series of experiments, he still finds that *trichophyton tonsurans*, while it grows freely on the surface of vitreous humor in an incubator, does not germinate when completely immersed in the fluid. He has presented a report on *microsporon furfur*, showing that it remains sterile when cultivations are tried in a variety of suitable media, in which common fungi grow freely. The parasite is therefore not one of the common fungi, but a special fungus, whose only soil yet known is the human skin. He is still investigating Chinese leprosy. He has found, in the skin of Chinese lepers, a bacillus of the same size and form, and with the same staining qualities, as the bacillus lepræ described by Hausen, Neisser, Cornil, and Suchard, and others, on the Continent. Further reports will be published in the *Journal*.

Dr. Chapman's paper on the

VARIATIONS AND DURATION OF THE CARDIAC VENTRICULAR SYSTOLE IN MAN UNDER DIFFERENT CONDITIONS OF PULSE RAPIDITY, TEMPERATURE, ETC.,

was presented at the annual meeting.

His investigations showed that in increased pulse-rate from severe exertion the systole is shortened, and in some cases the shortening was more, proportionately, than the diastole. Thus the pulse-rate in one case, when the experimenter was at rest, was 63 per minute, systole 3.30, diastole 3.90; after severe exertion, the pulse-rate being 115, the systole was 2.20, diastole 3.00.

In another case before bath the pulse-rate was 57.7; systole, 3.50; diastole, 6.90. After a short immersion in a hot chamber, temperature 140° F., the pulse-rate was 62; later, the bodily temperature being 100.7° F., pulse-rate was 80; systole, 2.60; diastole, 5.00.

Dr. G. F. Dowdeswell will soon report his investigations of the "Intimate Nature of the Contagious and Acute Infective Diseases" made during the past year. It has been found among other things that both in the case of the so-termed Pasteur's septicæmia in the guinea-pig and of Davaine's septicæmia in the rabbit, when the exudation fluid and the blood respectively are effectually sterilized by heat, they are no longer toxical nor in any way infective, nor are the characteristic micro-parasitical organisms in either case reproduced.

Mr. North is engaged in experiments upon the

ELIMINATION OF NITROGEN,

As the result of some observations on the elimination of nitrogen during inanition (*Journal of Physiology*, vol. i.), he came to the conclusion that a certain amount of nitrogen can, as it were, be stored in the body, and that, under certain circumstances, this reserve fund can be drawn upon to supply its needs. He has endeavored to discover to what extent this storage of nitrogenous material is possible, and the effect of severe bodily labor on its elimination from the body. The chief points of difference between Mr. North's observations and those of other observers are, the duration of each experiment, the diet, and the amount of exercise taken. The experiments are all made upon himself. Mr. North has been particularly careful in the diet adopted during his experiments.

Mr. A. De Watteville and Dr. Waller have been making some important researches into the

ELECTRO-PHYSIOLOGY OF THE HUMAN NERVES,

with the object of determining whether the same alterations of excitability during and after the passage of a galvanic current which physiologists demonstrate in the exsected frog's nerve, also occur in the living human nerve. For this purpose they chose nerves which are placed superficially, such as the mitral, perineal, etc., and estimated their excitability under various conditions of polar influence, by comparing the amplitude of the muscular contractions registered on the myographion. They showed that the effects produced were not due to any physical causes, such as alterations of current strength, mutual interference of polarizing, and testing currents, and the like, and found that these effects interpreted in the light of Helmholtz's proposition—"that owing to rapid current diffusion in the embedded nerve, a pole of the opposite name to that applied to the surface exists in its immediate neighborhood"—that these effects coincided in the main with those observed on the frog's nerve. Their conclusions are these. 1. There is increased excitability in the portion of the nerve submitted to cathodic influence, diminished excitability in that submitted to anodic influence. 2. With sufficient strength of polarizing current, the catelectrotonic region appears to invade the anelectrotonic region. 3. On opening the polarizing current the diminished excitability of the anodic region passes at once into a state of augmented excitability. The augmented excitability in the cathodic region makes way to a well-marked diminution, gradually followed by a protracted increase of excitability.

At the conclusion of the report it was voted that it be accepted and that a grant of £300 be made for the coming year.

After some miscellaneous business and votes of thanks, the General Meeting was adjourned.

SECTION OF MEDICINE.

Dr. A. S. Myrtle, of Harrogate, read a paper upon

A CASE OF ACUTE ASCENDING PARALYSIS—CHRONIC ALCOHOLISM.

The case was reported not only on account of its rarity, but because it afforded a unique illustration of metastasis of disease. For years the organs which exhibited the poisonous action of alcohol were the liver, stomach, and uterus; all were kept in a state of irritability and hyperæmia; and both liver and uterus were materially enlarged, the latter failing in the performance of its functions, with sterility as the natural result. As soon as the first symptom of spinal mischief made its appearance, the organs previously affected began to show an amount of healthy activity which were very puzzling: the usual sickness and vomiting ceased, the appetite for wholesome food and capacity for digesting the same returned, the tenderness and fulness over the liver gave way, the bowels acted regularly, the urine became healthy, and the function of menstruation natural. The detailed history of the case was then given, which was that of a young married woman aged twenty-two.

Commenting upon the fact that no cerebral symptoms were present, the author quoted a remark of Dr. Allbutt: "I have often seen women given to the abuse of stimulants suffer from severe shooting pains in the legs, and these were always accompanied by great muscular weakness. The spine of women seems to be more affected in alcoholic poisoning than that of men, whose brains become affected instead; so we have spinal paralysis in the one, delirium in the other. Of this I am certain, that delirium tremens seldom appears among women. In my long experience, I cannot recall a single case, and among men I have met with hundreds."

In the discussion which followed,

Dr. Broadbent said that he had seen the case, and did not consider it one of acute ascending paralysis. He considered the case to belong to a group of which he had seen four or five examples besides that of Dr. Myrtle's patient. The disease was a peculiar form of paralysis which he had only met with in women, and as a result of alcoholic excess. The loss of power did not affect the lower extremities first and completely, gradually ascending to the chest and arms, but was more or less present in all the limbs; in the upper extremities the extensors of the wrist were often predominantly affected at first, but later the flexors suffered, and then the hand dropped according as the forearm was pronated or supinated; there was a peculiar softness and flabbiness of the muscles when they were handled, and the very remarkable congestion and swelling of the feet and hands mentioned by Dr. Myrtle when they were allowed to hang down, even for a few minutes, was present. This was, of course, due to vaso-motor paralysis, and probably had much to do with the peculiarities of the affection. All the cases he had seen proved fatal except one.

Others who spoke seemed to agree that it was not a case of acute ascending paralysis.

Dr. Francis Warner, of London, read a paper on

THE STUDY OF THE FACE AS AN INDEX OF THE BRAIN.

In almost all cases, the speaker said, the best indications of the conditions of the central nerve mechanism are its effects as seen in the spontaneous action of the muscles; and it is by the result that that we usually judge of the central condition. Such effects are conveniently spoken of as nerve-muscular signs. Nerve-muscular signs are the best indices of the brain. The change in the brain affects the muscles; these control the position of the visible parts; and, from the facial changes resulting, we gather our information.

We are here, he said, studying the results of cerebral action upon muscles, according to well-understood principles of physiology; while physiognomy

deals mainly with the shape of the brain-case and the passive condition of the face.

The principal movements of the facial muscles are these:

First.—Dilatation and contraction of the facial foramina; probably this corresponds in significance to flexion and extension.

Second.—Elevation and depression of parts. Such conditions are well seen by comparing the two sides of the face in a case of Bell's paralysis.

Third.—Retraction and drawing forward of parts, as in grinning and screwing up the mouth.

Symmetry is a point of especial importance to study. Lack of symmetry in the different zones is very common in nervous people. In the upper zone of the face the occipito-frontales are often seen over-acting in imbeciles and in cases of chorea; sometimes, also, they overact as a mere "chronic nervous habit." Symmetry in this zone is, however, usually maintained. In the middle zone symmetry is less uncommon. It is seen in winking and in ptosis. The important muscles here are the orbiculares oculorum. With megrim, and in conditions of depression, a marked change is often seen in the midfacial zone, due to a fulness about the eyes, especially about the under eyelids; the orbiculares have lost their tone, the skin hangs too loosely, the skin of the lower eyelid, instead of forming a convex surface, passes as a plane from the ciliary margin to the lower margin of the orbit.

In the lower zone, we see the most marked effects of facial spasm or palsy from brain-disease—*e.g.*, in hemiplegia and lesion of the crus cerebri. The muscles of this region are those most commonly seen in spontaneous action in imbeciles.

Dr. Agmondisham Vesey, of Magherafelt, read a paper upon

A CASE OF SPINAL HEMIPLEGIA FOLLOWING GANGRENE OF THE RIGHT GREAT TOE.

A gentleman, aged seventy, previously healthy and temperate, had been suffering for three months from pains in the calves and burning sensation in the feet. In about two weeks after he was first seen the right toe became gangrenous. The superficial veins in the right forearm were hard and filled with clots. Elsewhere the veins were normal. Two weeks later the left arm was completely paralyzed; next day the left leg became involved. The head was in no way affected. A cardiac murmur was present. The right side of the body was anæsthetic, while the left side was slightly hyperæsthetic. The patient died comatose next day. No post-mortem.

The points of interest in the case were these: 1, the tendency to formation of blood-clots; 2, the development of a cardiac murmur (thrombosis); 3, the paralysis of the left arm alone first; 4, the sequence of complete spinal hemiplegia on the next day; 5, the absence of any form of cerebral paralysis; 6, the general anæsthesia of the right side; 7, the limited hyperæsthesia of the left side; 8, the rapid ending of the case within thirty-six hours of the completed paralysis of the left half of the body.

SECTION IN SURGERY.

At the Second Session Mr. Bryant related a case of

DOUBLE POPLITEAL ANEURISM,

of which one was cured by pressure, and the other by Speir's artery constrictor with antiseptic (not aseptic) precautions.

Mr. Thompson related the history of his case of

LIGATURE OF THE INNOMINATE ARTERY

for subclavian aneurism, and showed the specimen. Subsequent speakers were quite agreed that the fatal result was not dependent upon the ligature of the artery, but was due to ulceration of the drainage-tube sinus, probably opening up the vertebral artery; the ligature (ox aorta) had acted perfectly.

Mr. A. H. Dolman reported a

CASE OF TRAUMATIC AXILLARY ANEURISM

successfully treated by ligature of the subclavian artery. So much difficulty was met with in getting the thread around the artery (the left), that the clavicle was divided to expose the vessel.

Mr. Barwell showed the aneurism needle he had had made for cases of this kind, and expressed his belief that had it been employed division of the bone would have been unnecessary.

Mr. Bartleet read a paper on five cases of

LIGATURE OF LARGE ARTERIES.

One was a case of femoral aneurism, for which he tied the common femoral trunk with chromic catgut; the wound did not remain aseptic, and secondary hemorrhage came on. The wound was then opened up, when it was found that the artery had separated one-tenth of an inch above the ligature. The two ends of the vessel were then tied with a hempen thread. Again there was repeated secondary hemorrhage, for which the external iliac artery was ligatured with whipcord, with a final successful result.

Mr. Bennett May related a case of

LIGATURE OF THE EXTERNAL ILIAC ARTERY

and discussed the best material for ligatures, and stated that there was more difficulty in getting primary union of a wound when chromic catgut was used than when carbolic gut was employed, and he expressed his preference for common catgut soaked for a long while in carbolic oil.

Mr. Robson showed an apparatus for obtaining an

ANTISEPTIC ATMOSPHERE

to replace the carbolic acid spray in surgical operations, asserting that while the carbolic acid spray was aseptic, it was not antiseptic, and was also harmful. Mr. Robson advocated the value of an antiseptic, dry, non-poisonous atmosphere. This he obtains by pumping air through cotton-wool to purify it from all suspended impurities, and then through eucalyptus oil. To show the antiseptic value of an atmosphere of this kind, he had taken several large, wide-mouthed glass jars and poured a little of one of these oils into each, and had then suspended jars of sterilized hay infusion in them, and had removed their cotton caps for various periods; in every instance except one bacteria had not subsequently developed in the infusion. He had also used it for surgical purposes, and Mr. Spencer Wells had employed it during the excision of a mamma, and had expressed himself pleased with it.

Mr. R. H. B. Nicholson recorded a successful case of gastrostomy.

Mr. George Elder related a successful case of nephrotomy and nephrectomy for scrofulous pyelitis.

Mr. Lawson Tait showed a girl from whom he had excised a kidney through the linea alba; he also showed the kidney, which was sacculated, and contained a large calculus.

Dr. Cullingworth related a case of

NEPHRECTOMY

by abdominal section for hydronephrosis, in which the patient died from shock twelve hours after the operation; and in reference to this case Mr. Tait remarked that he should never attempt nephrectomy for renal cysts, as the operation of incising and draining these cysts proved so successful in his hands.

MR. LAWSON TAIT recorded a third successful case of

CHOLECYSTOTOMY,

and showed a large number of gall-stones he had removed from the gall-bladder. The gall-bladder formed a prominent abdominal tumor, and it was an interesting feature of the case that although the cystic duct was completely obstructed, there had not at any time been jaundice. He opened the gall-bladder, and stitched the edges of the wound in it to the abdominal incision, and extracted a large number of stones. The discharge had continued mucous until that week, when bile had made its appearance, showing that the duct had become patent again. Mr. Tait therefore intended to freshen the wound and close the sinus.

Mr. Lawson Tait then read a paper on

ONE HUNDRED CONSECUTIVE CASES OF OVARIOTOMY

performed during the last thirteen or fourteen months, and in which he had not used any kind of antiseptic measure. Of these, three patients died, one from choking during vomiting, and two from venous thrombosis, starting at the pedicle and spreading quite up to the heart. Six of the patients were pregnant at the time of operation, one in addition had acute peritonitis—all got well; one of them miscarried, and five were delivered of living children at term. Four patients had acute peritonitis at the time of operation, and all recovered. In two the tumor was solid fibroma of the left ovary; in ninety-eight it was cystoma. Of the latter eleven were parovarian cysts, sixty were cysts of one ovary only, and among these were the three deaths, and twenty-seven were cysts of both ovaries. In fifty-three cases there were serious adhesions, but he had not found that this fact in any way added to the mortality. Of the three fatal cases there were no adhesions in two, and slight parietal adhesions in the third. In seventeen cases the tumor was sessile. All these cases were dressed with dry absorbent cotton-wool; in about one-twentieth of the cases a part of the wound opened, and then it was dressed with zinc ointment or red lotion. Mr. Tait attributed his improved mortality: (1) To the total abandonment of Mr. Spencer Wells' clamp; (2) to the thorough cleansing of the peritoneum, as recommended by Keith; (3) to the draining of the peritoneum, as recommended by Keith; (4) to increased personal experience; (5) to the diminished number of cases which had been previously tapped; the two of his patients who had died from thrombosis had been tapped, one sixteen and the other thirty times; he believed that if tapping was never adopted there would be no mortality after ovariotomy, except from tetanus and similar outstanding risks; (6) the complete abandonment of antiseptic treatment; (7) the establishment of hospital discipline and hygiene. This he deemed of so much importance that in only exceptional circumstances would he consent to operate in private houses.

The discussion which followed was quite an active one, and turned upon the subject of antiseptics.

MR. COATES said that it was very difficult to harmonize Mr. Tait's statements with those of Dr. Stokes earlier in the day in reference to antiseptics. But his experience in general surgery was that while before his adoption of the Listerian treatment he did not obtain primary union of wounds in one per cent. of his cases, since that adoption he obtained it in every case.

MR. M. THOMSON referred to the great diminution in the mortality of his cases that Mr. Tait observed when he first adopted the antiseptic treatment, and maintained that the results of general surgery abundantly proved the value of this treatment.

DR. BANTOCK, in opposition to Mr. Tait, maintained that adhesions of ovarian tumors to intestine and pelvic organs are serious complications of ovariotomy. He had given up antiseptics, and he had not had more septicæmia than other operators who had used it, and he asserted that Listerism had not freed us from septicæmia.

DR. SUTTON had spent a considerable period in studying European surgery, and he stated that in Berlin, Vienna, Halle, Kiel, and Leipsig, he found antiseptics everywhere, and such results obtained that on coming to England he dared not have opened the abdomen without employing them. He then went to see Keith's practice, and his views were changed; for Dr. Keith and his son (who has done five cases) had had a run of fifty-five cases of ovariotomy with only one death; alluding to Dr. Keith's abandonment of Listerism, he said that he had Dr. Keith's authority for stating that he had never used the carbolic spray stronger than was recommended by Prof. Lister. He had also seen Mr. Tait's practice for three or four weeks, and he had been very careful to watch his practice closely; but he had only seen one of his wounds in which there was a drop of pus—one already mentioned by Mr. Tait.

DR. ED. TAYLOR, who was for some years Mr. Spence's assistant, said that antiseptic surgery was often an excuse for careless surgery.

MR. TAIT in conclusion criticised the frequent changes in the methods adopted by those who employed Listerism.

SECTION IN PATHOLOGY.

The Section was opened with a debate on "The Pathology of Diabetes." The debate was somewhat unsatisfactory, owing to the absence of Prof. Hamilton, who had been expected to open it.

DR. STEPHEN MACKENZIE spoke of diabetic coma and thought that it was due to a complex of causes, but in most cases that acetonæmia was the leading factor, while only a small proportion were due to fat embolism.

DR. SAUNBY said that he had rarely been able to demonstrate fat embolism in diabetic coma.

DR. SHINGLETON SMITH contended for the nervous origin of diabetes, and related a case in point.

Papers were read by DR. SAUNBY on "Changes in the Sympathetic in Bright's Disease," and by DR. GOWERS on "Certain Pathological Changes in the Spinal Cord."

At the second meeting MR. JONATHAN HUTCHINSON opened a debate on the

ETIOLOGY OF TUMORS,

and contended for their local origin. He was followed by SIR JAMES PAGET, who stated his well-

known views on this subject; and by MR. BUTLER, DR. THIN, and others, who showed microscopical preparations.

MR. R. WILLIAMS read a paper on "Sarcoma of the Bladder."

At the closing meeting, DR. SANGSTER read an exhaustive paper on

RODENT ULCER,

in which he tried to establish the fact that the disease is not primarily connected with the sweat-glands, but that the morbid change starts from the Malpighian layer and outer sheath of the hair-follicles.

DR. THIN disputed this view.

The rest of the morning was occupied with a demonstration of various forms of bacilli, which excited a good deal of interest, and was one of the most successful events of the meeting.

DR. HERON showed Ehrlich's process of preparing tubercle bacillus, and he was followed by DR. GIBBES, who demonstrated his process of preparing the same bacilli, which was described in *The Lancet* of August 5th. It was very evident that this process, while decidedly simpler than Ehrlich's, was also more effective, and is, therefore, more useful.

DR. S. MACKENZIE also showed a specimen of tubercle bacillus prepared by Goltdammer's method.

DR. SHINGLETON SMITH showed bacillus anthracis, and DR. THIN the bacillus of leprosy.

SECTION IN OBSTETRICS.

DR. BANTOCK read a paper on "Hysterectomy," and related a number of cases operated upon by himself. In the debate Drs. G. Williams and Wallace strongly opposed the operation.

DR. EDIS read a paper on "Menorrhagia." He was followed by DR. C. H. ROUTH with a paper on "Dysmenorrhœa Associated with Gonorrhœa."

SECTION IN OPHTHALMOLOGY.

DR. EDWIN ANDREW opened the discussions with a paper on the

EXTRACTION OF CATARACT IN THE LENS CAPSULE.

He described new instruments for separating the lens from its capsule by tearing the suspensory ligament. To obviate pressure, he had abandoned the speculum and kept the lids apart by passing a thread of catgut through one or both lids.

Dr. Andrew advocated a more frequent use of his method.

In the discussion, the opinion was developed that this method was especially applicable in over-ripe cataracts and in aged persons, in whom the suspensory ligament has a less resistance.

MR. ANDERSON CHRITCHETT read a paper on the

TREATMENT OF LAMELLAR CATARACT.

He advocated the formation of an artificial pupil, by Tyrell's hook, in preference to removal of the lens.

DR. ARTHUR BENSON read a paper on

PARTIAL TRICHIASIS,

in which he recommended the removal of the offending hairs, with needles, by electrolysis.

MR. NETTLESHIP and MR. PRIESTLEY SMITH reported three cases of

NEURITIC ATROPHY OF THE OPTIC NERVE,

followed by continuous dropping of a watery fluid from the nose. The fluid possessed negative characters and was not cerebro-spinal. In one case there was probably a growth in the nose; in another a mucous thickening. In one case there were curious nervous symptoms, *e.g.*, drowsiness and stupor. The flow then ceased. During one of these attacks the patient died.

MR. NETTLESHIP opened a discussion on "The Value of Eye Symptoms in the Localization of Brain Disease." The speaker thought that in most cases of hemianopia the lesion, as in hemiachromatopsia, is higher up than the optic tracts.

SECTION IN PUBLIC MEDICINE.

DR. NORMAN KERR read an important paper upon the

PUBLIC MEDICINE ASPECTS OF THE ALCOHOL QUESTION.

His object was to show the amount of sickness and death caused by alcohol. Some diseases, he said, were caused by alcohol alone, as delirium tremens, dipsomania, and alcohol poisoning, acute and chronic. Some, which arose from other causes, sometimes were caused by alcohol directly, as alcoholic phthisis, gout, and paraplegia. Alcohol might also be a main contributory factor, as in fatal frost-bite and sunstroke after drinking. The proportion of sickness and death from alcohol had been shown in the Government returns of the Indian Army for 1849. The mortality of the temperate was double and that of the intemperate quadruple that of the total abstainers. The abstaining deaths were 11.1 per 1,000; the temperate 23.1; and the intemperate 44.5. The admissions of the abstainers were only 10.7 per 1,000 less than those of the temperate, showing that the diseases of the former took a milder form. Insurance companies were so satisfied of the superior healthfulness of the abstinent, that one had paid the abstainers insured 23 per cent. additional bonus, and another offered an extra bonus of 20 per cent. The influence of alcohol on the death-rate was well illustrated in the Registrar-General's report for 1880.

From this report it could be seen that in every class except one the mortality had steadily diminished; but in Class III. the mortality had as steadily increased. In this class the principal increase had been in deaths from diseases of the brain and nervous system, of the organs of circulation, of the respiratory organs, of the liver, and of the kidneys. These were precisely the organs most apt to be seriously affected by indulgence in alcohol. Dr. Kerr had estimated the annual deaths from personal intemperance in the United Kingdom at 40,500. Others made it larger. The indirect fatality by violence, disease, poverty, etc., arising from the intemperance of others, would probably raise the number to 120,000 or 200,000. For the cure of dipsomania, total abstinence was indispensable. Heredity was the chief predisposing cause. The marked increase in the variety and consumption of unintoxicating beverages was an aspect of the question which called for the consideration of students of public health, as an increased use of non-intoxicants was a favorable omen of the future improved sobriety and consequent health of the community.

The second meeting was devoted to a discussion on the "Compulsory Notification of Infectious Diseases."

Correspondence.

ANOTHER REMARKABLE CASE OF TRANCE LETHARGY.

To the Editor of The Medical Record.

Sir: I have lately had opportunity to see the extraordinary case of *natural* trance now exciting so much attention in the Beaujon Hospital, Paris.

It resembles in its history and in many of its phenomena the case of trance lethargy in Pennsylvania that aroused so much interest in our country, and which is described by me in The Medical Record, page 513, 1881, and also in my brochure on "Trance and Muscle Reading," page 10.

On account of the resemblance in the two cases, I write this preliminary note.

I presume the details of the Paris case will be published in the medical journals.

The patient, a comparatively young woman, was picked up in one of the streets of Paris in a condition of supposed intoxication. She remarked that she had been drinking too much beer. Since that time (eighty days) she has not spoken a word, but has lain unconscious, or apparently unconscious. *Fifty-seven days after admission she was delivered of a five months' child, and apparently was unconscious of the act of parturition.* This is the one unprecedented fact of the case.

A few days before I saw her, douches had been applied by the suggestion of Dr. Charcot. The second douche had the effect to partially bring her out of her condition. Her pulse, before normal, was 100 at the time I saw her. Before, she was fed like a baby, like the case described by me. She now takes food with her hand, and she hears and responds automatically to commands. It is said she cannot stand or walk; but I do not know whether thorough experiments have been tried in that direction.

The nutrition of the body is well preserved, just as in the case of the Pennsylvanian, who was in this condition one hundred and sixty-nine days, or more than twice as long as this Paris case.

The last I heard of the Pennsylvanian case was that he had recovered, but was either insane or a border-liner. He was, however, able to work and mingle with the world. It is probable that such will be the issue of the present case, provided she has sufficient physical strength to endure and keep from dying.

As I have elsewhere stated ("Trance States following Inebriety," by Dr. Crothers—Introduction), these cases are not unconscious in the true sense of the term, but they lack *rememberable consciousness;* they know, in a dim way, *at the time*, what they are doing, but are unable to recall what they have done.

If this woman should recover, she would not remember anything about her parturition.

Her condition is mental, the physical phenomena being merely incidental, and if the brain could be examined we should obtain no more information than from the brain of Guiteau.

The Germans apply the term katatonia to these and similar cases. The term is unfortunate and misleading, like scores and scores of other terms that have been applied to these trance states. No term is needed beyond the oldest and simplest word trance, which always has been, and always will be used.

As is now well known to American physicians, trance lethargy can be produced *artificially.*

In Paris, Charcot has made many experiments in that direction during the past few years.

George M. Beard, M.D.

Note.—I wrote a few lines the other day from Paris in reference to the case of trance lethargy. I have since learned that the patient recovered her speech a few hours after I saw her, and on the evening of the same day, the eighty-second day of her trance.

She says that her name is Marcelline Bertrand, and that she is thirty years of age. Her temperament is mystic, and she had at one time been in a convent. After leaving the convent she served as a domestic, and was seduced. Her mistress, then living in Tréport, perceiving that she was *enceinte*, turned her away.

She professes no recollection of coming to Paris from Tréport, up to the time that she was found in the street; but has been conscious of what has been taking place since that time, including her accouchement, although unable to speak or move.

G. M. B.

Geneva, August 6, 1882.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 27, 1882, to September 2, 1882.

Alven, Chas. H., Major and Surgeon. Granted leave of absence for three months. S. O. 196, C. S., A. G. O.

Barrows, Chas. C., Assistant-Surgeon. Assigned to duty at Fort Grant, A. T. S. O. 130, Dept. of Arizona, August 21, 1882.

Bill, J. H., Major and Surgeon. Granted leave of absence to December 1, 1882. S. O. 196, A. G. O., August 24, 1882.

Brown, J. B., Lieutenant-Colonel and Surgeon. Granted leave of absence for six months on surgeon's certificate of disability. S. O. 200, A. G. O, August 29, 1882.

Egan, P. R., Assistant-Surgeon. Assigned to duty at Fort Bowie, A. T. S. O. 134, Dept. of Arizona, August 25, 1882.

Hubbard, V. B., Major and Surgeon. Assigned to duty at Fort Wingate, N. M. S. O. 172, Dept. of the Missouri, August 28, 1882.

Macauley, C. N. B., First Lieutenant and Assistant-Surgeon. Assigned to temporary duty at Fort Columbus, N. Y. S. O. 147, Dept. of the East, August 25, 1882.

Munn, C. E., Captain and Assistant-Surgeon. The leave of absence granted him in S. O. 117, July 28, 1882, Dept. of the Missouri, is extended two months. S. O. 196, C. S., A. G. O.

Owen, Jr., Wm. O, First Lieutenant and Assistant-Surgeon. Assigned to temporary duty at Vancouver Barracks, W. T. S. O. 114, Dept. of the Columbia, August 11, 1882.

Skinner, J. O., Captain and Assistant-Surgeon. To take charge of Medical Director's office, Dept. of Arizona. S. O. 131, Dept. of Arizona, August 22, 1882.

Smith A. K., Major and Surgeon. Granted leave of absence for one month on surgeon's certificate of

disability. S. O. 131, Dept. of Arizona, August 22, 1882.

WAKEMAN, W. J,, First Lieutenant and Assistant-Surgeon, now at Omaha, Neb., to report to the Commanding Officer, Fort D. A. Russell, Wyoming, for duty. S. O. 88, Dept. of the Platte, August 25, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — **Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending** September 2, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
August 26, 1882.	1	29	29	5	9	45	0	0
Sept. 2, 1882.	1	32	24	5	9	31	0	0

THE FEVER AT SEABRIGHT, NEW JERSEY.—Further investigation by the State and Local Health Boards of the hotel where typhoid fever appeared makes it possible, though not certain, that the fever was due to bad drainage. The wastes of the hotel were disposed of by two cesspools with overflows into the river close by. The overflow in one case was stopped up, and the house pipe leading to it was not trapped, though the soil pipe was carried above the roof with end open. The soil of the cellar was somewhat polluted, but the drinking water was good and not contaminated so far as is ascertained.

THE VACATION OF A SUCCESSFUL PRACTITIONER.—*Wife* (to doctor just home from a week's hunting).—"Well, James, did you shoot anything?"

Doctor (sadly).—"No. Awfully bad luck; never killed a thing."

Wife (who knows him—sweetly).—"My dear, you'd have done better if you had stayed at home."

HOG CHOLERA, or the infectious pneumo-enteritis of swine, has appeared in the vicinity of Reading, Pa.

THE TEXAS CATTLE FEVER has appeared in Penobscot County, Maine, eight animals having so far died from the disease.

THE SOCIAL SCIENCE ASSOCIATION met during the past week at Saratoga.

HEALTH ALONG THE NEW JERSEY COAST.—The authorities of Monmouth County, N. J., have forbidden any sewerage or refuse to be drained into the Shrewsbury River.

THE PRINCE OF WALES AND MEDICINAL WATERS.—That great and good man, the Prince of Wales has gone to Germany to take the waters. The London *Times* thereupon thus sweetly effervesces: "The Prince of Wales needs a holiday, though he may not be aware that he wants it. That he has submitted to take it at the instance of medical wisdom, which considers mental as well as physical circumstances, is a fresh argument of his royal good sense. If he is directed to temper his vacation with a course of mineral waters, he may be sure his system is condemned to imbibe no more salts and carbonates and alkalies than will constitute the minimum qualification for a moderate respite from the tyranny of social observances."

A HOMŒOPATHIC CRITIC CRITICISED.—Certain of our esteemed contemporaries who have charged Dr. Piffard with being an insidious defender of homœopathy should read his caustic criticism of a Dr. Price in the *New York Medical Times*, the leading journal of liberal homœopathy. Among other things, he says: "Dr. Price says: 'Probably the fact may never have occurred to Dr. Piffard that a doctrine of Hahnemann and a law of nature are not necessarily synonymous.' I do not know what I have written to lead Dr. Price to the above remark. The laws of nature (relating to drug action) are mostly unknown to us, but the doctrines of Hahnemann are in black and white, and their meaning cannot be easily misunderstood. The three most prominent of his doctrines are: 1st, that *all* diseases should be treated according to the principles of *similia;* 2d, that the thirtieth dilution is the *best* dose; 3d, that chronic diseases are the emanations of either syphilis, sycosis, or psora. The man that believes these propositions is a Hahnemannian, and may, if he chooses, call himself a homœopathist. The man that doesn't believe them is not the former, and should not *call himself* the latter. Nine-tenths of those who are known as homœopaths do not believe the doctrines above noted, or at least do not appear to act on them, and their proper course as physicians, at the present medico-political juncture, ought to be clear to them."

THE UNIVERSITY OF WÜRZBURG celebrated its three hundredth anniversary this month. In honor of this event, honorary distinctions were conferred—sparingly. Four gentlemen—Prof. Quincke, of Heidelberg, Prof. Clausius, of Bonn, Prof. Charcot, of Paris, and Herr Bdaumüller, the Vienna bookseller—were recipients of honorary M.D. degrees.

THE AMERICAN DERMATOLOGICAL ASSOCIATION, at its annual meeting in Newport, September 1st, elected the following officers: *President*—Dr. R. W. Taylor, of New York; *Vice-Presidents*—Dr. J. E. Atkinson, of Baltimore, and Dr. A. R. Robinson, of New York; *Secretary*—Dr. Arthur Van Harlingen, of Philadelphia; *Treasurer*—Dr. George H. Rohe, of Baltimore. The new members elected were Drs. P. A. Morrow, of New York, and W. H. Stillwagren, of Philadelphia. The next meeting of the Association will be held at Lake George on the first Wednesday in September, 1883.

THE CANADIAN MEDICAL ASSOCIATION met at Toronto this week, September 6th, 7th, and 8th. Dr. Fenwick, of Montreal, President, occupied the chair. There was a very good attendance and about twenty papers were read, some of which were of a high standard. A brilliant reception was given by the profession on Thursday evening. Altogether the meeting was a most successful and satisfactory one.

INOCULATION OF BOVINE TUBERCULOUS MATTER IN MAN.—Two Greek physicians have recently made a direct experiment to see whether bovine tuberculosis could be inoculated in man. The subject of the experiment was a common laborer, who, in consequence of arterial occlusion, was slowly perishing from progressive gangrene of the leg. In other respects the patient was healthy, and a careful examination showed that the lungs were in normal

condition. As he refused to submit to the amputation of the limb, pronounced necessary to save his life, his medical attendants decided to test by direct experiment whether tubercle can be propagated from phthisical cows to man by inoculation. A quantity of tuberculous matter was accordingly injected into the circulation, whether with or without consent is not specified. The man lived about six weeks, then died of the blood-poisoning inseparable from progressive gangrene. The autopsy disclosed the existence of well-defined tuberculous deposits, without abscess or other disease of the pulmonary organs, very small, evidently very recent, and, as the daring experimentalists argued, the direct result of the inoculation.

The Philadelphia Presbyterian Hospital has just received a bequest of $10,000 by the will of the late George W. Musgrave, D.D.

The Sanitary Condition and Endemic Diseases of Egypt.—A correspondent of the *British Medical Journal* writes that up to a recent date the sanitary condition of Alexandria was good. After the bombardment a sanitary commission was appointed, by whose labors the dead were buried and the streets cleaned. The endemic hæmaturia, which is still the scourge of the fellaheen population who drink the unfiltered water from the Nile and canals, is one of the diseases to which our soldiers will be exposed, and against which it will be difficult for them to guard. Nearly three-fourths of the natives in some parts of the Delta suffer from this disease; while Europeans living in the same locality, who use none but well-filtered or well-boiled water, escape it. Any European who has contracted the disease has, in my experience, always confessed to having habitually used the muddy unfiltered water from the canals; and there can be little doubt that the *Bilharzia hæmatobia* finds its way into the system by the water. The disease prevailed among the French troops of the expedition of 1800.

A Therapeutical Failure.—The attempt to secure harmony in C(h)orea.

A Student of Women.—A French physician advocates some novel theories regarding women, and claims to know about them as well as anyone can who has dissected them much and loved them much!

Obligatory Vaccination in Switzerland.—Vaccination has been heretofore obligatory in Switzerland. By a recent vote the law was annulled. The vote was as follows: In favor, 62,522; against, 225,730. There will no doubt be some noisy cackling over this among the anti-vaccinators. The advisability of compulsory vaccination, however, is questioned by many, if not most sanitarians, outside of England.

The French Association for the Advancement of Science met this year at La Rochelle, on August 24th, for its eleventh session. M. Janssen presided.

An Important Literary and Scientific Discovery is announced from Salonica. The works of the celebrated physician, Galen, which were supposed to have been lost, have been discovered by M. Papageorges. They are in manuscript; date from the fifteenth century, and appear to have originally formed 248 sheets; 144 are in good condition, 24 are mutilated or worm-eaten, and 80 are missing.

No Appointment to the Chair of Morphology, left vacant by the death of Professor Balfour, will be made.

Is it Good for Nursing Women to Drink Beer?—At the camp meeting of the Women's National Christian Temperance Union, recently held at Ocean Grove, N. J., the Tabernacle was well filled at each of the four daily sessions, the ladies forming nine-tenths of the audiences. One of the interesting features was a "question box," in which questions were put on the first day to be answered on the second. One of the questions was, "Is it good for nursing women to drink beer?" It was answered by a member of the Union, Yankee fashion, by asking another question, "What is the condition of the milk of cows fed upon the refuse of breweries?" The questioner apparently was fully satisfied.

"St. Jacob's Oil" appears to be a feeble and badly made aconite liniment, and it consists mainly of water, ether, alcohol, turpentines, and a small proportion of aconite with red coloring matter.—Squibb's *Ephemeris*.

Substitution in Prescriptions.—The practice among the Philadelphia druggists of substituting cheaper medicines for the ones called for in prescriptions is said to be very common.

Belladonna Poisoning Treated by Bromide of Potassium.—Dr. Dorr (*Pacific Med. and Surg. Journal*, July, 1882) reports the case of a child, two and one-half years old, who was poisoned by belladonna. Opium alone apparently being without effect, 8 grains of the bromide was given every half hour. After taking 32 grains the child became quiet and went to sleep. In a few days she was entirely well.

How to Use Filix Mas.—The success of certain German "worm doctors" in using extractum filicis led Herr Dietrich to suppose that the best results are obtained when castor oil is administered immediately after the extract, instead of waiting an hour or two, the extract being more likely to reach the worm undecomposed and less likely to irritate the stomach during its rapid passage. Upon experiment this was confirmed (*Pharm. Zeit.*); in fact, the most favorable results were obtained when the extract and oil were administered together. This, according to Herr Dietrich, is most conveniently done in flexible capsules, each containing 1 gramme of extract and 2 grammes of oil. A dose consisting of six such capsules, preceded as usual by a laxative, has been found quite effective.—*Med. Press and Circular*.

The Small-pox Epidemic at Cape Town is reported to be assuming larger proportions.

Novel Method of Suicide.—On May 26th, Sarah Newman, in the Cork Hospital for Women and Children, committed suicide by stuffing her stocking down her throat so firmly that when discovered it was extricated only with great difficulty. It was done so quietly during the night that the occupants of the next beds were totally unaware of anything amiss until the morning.

Iodoform in Diabetes.—Prof. I. Moleschott, of Rome (*Wien. Med. Woch.*), in a lengthy article gives a careful analysis of the treatment of diabetes mellitus with iodoform. He is of opinion that it is of decided advantage, and exerts a greater control over the amount of sugar than the amount of fluid passed. His formula is: iodoform, 1 gr.; ext. lactuc. sat., 1 gr.; cumarin, 0.1 gr.; gummi acac. q. s.; ft. pil. 20. One twice a day, increasing to two four times a day.

Original Communications.

UTERINE AND VAGINAL DISCHARGES.[1]

By JAMES B. HUNTER, M.D.,
SURGEON TO THE WOMAN'S HOSPITAL OF THE STATE OF NEW YORK, ETC.

It is not my intention in this paper to treat of the whole subject of uterine and vaginal discharges. I wish only to present a few of its more prominent features, with especial reference to the therapeutic measures I have found most useful in some forms of what is known as "leucorrhœa." Leucorrhœa, so-called, is one of the commonest symptoms for which medical advice is sought, and perhaps for that very reason it is often the subject of a routine treatment that is as likely to do harm as good. I shall have nothing to say of the normal menstrual discharge, and very little of hemorrhagic discharges, or of those due to venereal disease, but shall endeavor to show the importance of discriminating clinically between the different forms of leucorrhœa, varying widely as they do in pathological significance. Unless we carefully consider all the other symptoms in the case of a patient who complains of leucorrhœa, we cannot possibly prescribe intelligently. Much harm may be done by too vigorous treatment of a simple vaginal catarrh; while, on the other hand, regarding only the fact that there is a discharge from the vagina, some serious disease of the uterus may be neglected. Between these two extremes we find a great variety of discharges, very different in their history and character, and requiring different treatment. It will be sufficient for my present purpose to divide leucorrhœa into three varieties:

1. Vaginal.
2. Cervical.
3. Uterine.

Vaginal leucorrhœa.—As to the first, a slight increase in the normal secretion from the mucous membrane of the vagina gives rise to a discharge that attracts attention by the discomfort it causes. Some women are peculiarly liable to a temporary leucorrhœa of this kind, either from taking cold, from unusual exertion of any kind, or from mental excitement or anxiety. In unmarried girls, vaginal leucorrhœa is common as a result of impaired health from any cause, as excessive study, irregular hours, or any form of social dissipation. Simple, uncomplicated vaginal leucorrhœa is most common in girls, or young married women who have not been pregnant, and its importance depends on whether it is or is not persistent, and whether the amount of loss is large or small. The subjects of a constant leucorrhœa of this kind are pale and anæmic, with a small or capricious appetite, constipated bowels, and sluggish habit. In such cases, the symptom for which we are consulted, though it may be the most annoying or alarming one to the patient, is evidently only a consequence of the relaxed and depraved condition of the system, and it would be inexcusable to make it the target for our remedies. We must attend first to the general health, employing every means in our power to improve it. At the same time, the patient should be instructed to use simple vaginal injections of hot water, which alone exercise a decidedly tonic effect on the parts affected. If the discharge still persists, it may be necessary to direct the use, after the hot water, of some mild astringent. I always insist upon the thorough use, at least once a day, of water as hot as the hand can bear it, for at least ten minutes, the patient lying meanwhile on the back, over a bed-pan or other vessel. The addition of ʒ j. of pure carbolic acid to the gallon of water renders it more efficacious. If the discharge proves obstinate and does not yield to this simple treatment, it may be necessary to use some astringent or other drug. Whatever is used may be conveniently added to the last pint of the injection, so that it shall come in contact with the vagina after it has been thoroughly cleansed by the hot water. The most useful astringent is tannin, ʒ j. to the pint, with the addition of about fl. ʒ iv. of glycerine. The various astringent injections popularly recommended, such as that of white-oak bark, are generally too strong. I do not approve, as a rule, of the use of oily vaginal suppositories. The application of the drugs they contain is uncertain. An excellent injection in many cases of anæmic vaginal leucorrhœa is the fluid extract of eucalyptus globulus, ʒ j. to the pint of water. It is a mild astringent and a decided antiseptic. If these simple remedies, together with careful attention to the general health, do not benefit the patient, and if the leucorrhœa persists, it is our duty to make a physical examination. In the case of unmarried women, this should of course be postponed as long as possible, and looked upon as the last resort; but in the case of married women it is justifiable to make an examination earlier, especially as the probability is greater of finding some condition demanding local treatment. In the virgin we may find a flexion of the uterus sufficient to cause congestion of the cervix, or of the entire uterus. We may find a simple or a gonorrhœal vaginitis, in which case the astringents do harm, and must be discontinued. I have found a gonorrhœal discharge more likely to affect the urethra and bladder early than an ordinary vaginitis, but it is difficult to distinguish between the two. One of the best injections in simple vaginitis is the infusion of tobacco, a pint of it being used after the hot water. But the shortest way of curing any vaginitis is to tampon lightly with carbolized cotton once or twice a day, moistening the cotton-balls with equal parts of glycerine and water. Where local applications are required, we have the choice of many, but the best are nitrate of silver, gr. xx. to ʒ j., the fluid extract of eucalyptus, and the tincture of iodine. If the tamponing is done faithfully, that alone kept up for a week or ten days will often be found sufficient. In cases where the injection is relied on, and the discharge irritates or excoriates, ʒ j. of bicarbonate of soda to the pint of water commonly gives relief. Another excellent injection for simple vaginal leucorrhœa is a solution of common salt, ʒ j. to the pint; and where that does not answer, the same quantity of boracic acid often does well. No rule of treatment can be laid down for vaginal leucorrhœa, even for cases apparently similar; but what I wish to emphasize is the fact that very mild measures will suffice in uncomplicated cases; that such cases may be aggravated and rendered complicated by the early use of powerful astringent or other drugs; that if we begin with simple remedies we shall often end with them; that in all cases, especially in anæmic girls, the general health should never be lost sight of in our anxiety to relieve the patient of a solitary symptom; and that in unmarried women the existence of leucorrhœa without pain or other symptoms very rarely necessitates a physical examination.

[1] Read before the Practitioners' Society of New York, June 2, 1882.

Cervical leucorrhœa.—It often happens that the patient's voluntary description of her symptoms enables us to make a pretty accurate diagnosis. In addition to the leucorrhœa spoken of as vaginal, or in place of it, there is a thick, glairy, intermittent discharge, often resembling white of egg, sometimes stained with blood, and occasionally mixed with pus. This symptom is most commonly found in women who have been pregnant, but may occur in the unmarried. It signifies disease of the cervix. It may be a moderate degree of endocervicitis, or it may be extensive laceration or hypertrophy of the cervical tissue. This can only be decided by examination, which should be resorted to at the outset, in order to ascertain the amount of disease with which we have to deal. We may find ulceration of the cervix, but that is rare. We may find the cervix much congested and enlarged, and the os filled with a plug of tenacious material, which appears to distend it, and which consists chiefly of a hypersecretion from the Nabothian follicles. The cervix is often covered with small cysts, which, on being pricked, exude large drops of clear viscid fluid. In case there has been laceration of the cervix, the edges are everted, and the exposed surfaces, hypertrophied from exposure, are often intensely congested and extremely vascular, so that bleeding follows the slightest touch. It is this condition which is often spoken of and treated as "ulceration."

In the treatment of this form of leucorrhœa the injections recommended for simple vaginal discharges are of little value. Copious injections of hot water do much to reduce the congestion of the cervix, but they do not cure it. The astringent and other drugs are of no use whatever. If the laceration is not extensive, the exposed surfaces may be treated by the direct application of the strong tincture of iodine, of iodoform in powder, of a solution, or by the solid stick of nitrate of silver. Many other caustics are used and recommended for these cases, and during their use the discharge will diminish or even cease entirely, but only to return when the treatment is suspended. Where there is little or no laceration, but a diseased condition of the cervix itself, more powerful caustics, as the strong nitric acid, may sometimes be used with advantage. Where the cervix contains polypoid growths, or where the gland structure is diseased, the cautious use of the sharp curette is sometimes proper. Where the laceration is extensive and of long standing, I have never seen permanently good results from any application, however perseveringly employed. Here it is that surgery must be called to our aid. I have often seen patients who had suffered for years from a profuse cervical leucorrhœa, which had been treated in vain by every application that could be suggested, cured in a few weeks by simply uniting the torn surfaces after they had been carefully freshened and all the diseased tissue removed. In some aggravated cases applications seem to increase the congestion, and render the hard tissue even harder. Where it is desired to make applications, Sims' speculum should be used, and the tenacious secretion entirely removed first. This it is not always easy to do. A little absorbent cotton wrapped on the end of a piece of whalebone often answers well. A small piece of dry sponge held in a pair of forceps facilitates the cleansing of the diseased surface. Another method is to use a long-nozzled syringe, with which to draw the secretion out, or to dislodge it by a stream of hot water. The cervix should then be dried with a little absorbent cotton, the application made, and a flat piece of cotton, with a string attached, pressed against the cervix, and left there for some hours. A method I have sometimes found to answer well, after the congestion has been reduced by hot water, is to apply the solid stick of nitrate of silver over the whole surface, and as soon as it is dry, to paint it over with flexible collodion. One point to be remembered is that unless the exposed surface is perfectly free from secretion, the strongest caustics are neutralized and rendered inert. The prognosis in these cases, treated non-surgically, is bad. They get a little better, then a little worse again; the vagina suffers from the acrid secretion, and the condition of the patient grows slowly and surely worse. Under appropriate surgical treatment, most of such cases as I have described get entirely well. It is not my purpose to speak of the operation itself, further than to say that it should never be attempted without ample preliminary treatment. One other form of cervical leucorrhœa is that which accompanies malignant disease. After the period when epithelioma has been marked by hemorrhage, there is often a long period when there is merely a watery discharge, profuse and offensive, but without a trace of blood. It is observed by the patient to stiffen on the clothing, like starch. I have frequently found advanced malignant disease where the only thing of which the patient complained was "leucorrhœa." The treatment of these cases, when they are beyond the reach of surgery is, of course, only palliative; but it is an immense relief to these unfortunate patients to have the discharge arrested for a time. I have found nothing so efficacious for this purpose as swabbing the ulcerated surfaces with strong nitric acid, being careful to protect the surrounding parts during and after the application. In some obstinate cases of cervical disease brilliant results may be obtained by the use of the sharp curette, but as a general rule this means of cure is not indicated.

Uterine leucorrhœa.—A discharge from the cavity of the uterus is often recognized by its intermittent character. The patient describes it as coming suddenly "with a gush," and then ceasing for a time. It is often purulent, mixed with blood, and of a greenish color. It is particularly apt to irritate the vagina and urethra; it is worse for two or three days after menstruation, and it is often offensive; it is sometimes accompanied by pain. On examination with the speculum, the discharge may be seen pouring out of the os as the sound or probe is withdrawn from the cavity. Sometimes a discharge of pus will alternate with a hemorrhage. This form of leucorrhœa commonly signifies polypoid growths in the cavity of the uterus, destructive changes in a fibroid growth, sarcoma, or other malignant disease. The treatment in detail of these affections it is not my purpose to consider. It includes, in addition to other surgical measures, the use of the curette, and subsequent applications of iodine, strong carbolic acid, and possibly nitric acid. Here, again, medicated vaginal injections are utterly useless. Water alone, slightly carbolized, suffices to prevent the discharge from becoming offensive, and to remove it when it is so.

In conclusion, it must be remembered that we often find all the varieties of leucorrhœa existing at the same time, so that it becomes a matter of some difficulty to judge of the significance of this symptom. It is, indeed, impossible to do so without weighing carefully all the other symptoms; and it is only in this way that we can expect to arrive at rational therapeutic

measures. I wish to lay some stress on what I consider the danger of a routine treatment, which is the same thing as the danger of doing either too much or too little. The indiscriminate use of astringents often does more harm than good. In unmarried women we can often avoid any local treatment by dealing first with the general health and insisting on proper hygienic surroundings. In this class of patients we should resort to physical examination only after other measures have been fully tried, unless there is some evident reason, such as severe dysmenorrhœa, to guide us. On the other hand, in cases where surgical or mechanical aid is imperatively demanded, we should beware of losing precious time by experimental or expectant treatment. We should convert our suspicions into certainty, and give our patients the utmost benefit our knowledge will afford.

REMOVAL OF A LARGE NASO-PHARYNGEAL TUMOR WITH EXTENSIVE ATTACHMENTS TO BASE OF SKULL.

Unexpected Brain Complication—Death.[1]

By GEORGE F. SHRADY, A.M., M.D.,

SURGEON TO THE PRESBYTERIAN AND ST. FRANCIS HOSPITALS, NEW YORK, CONSULTING SURGEON TO THE HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK.

The following case is interesting from a surgical as well as a pathological point of view, illustrating as it does the possibility of removing by operation a

Fig. 1.

naso-pharyngeal polypus of large size and extensive attachments to the base of the skull, and at the same time demonstrating the inutility of the procedure on account of unexpected complications.

The patient was a lad, aged fourteen, a native of Woodstock, N. Y. Four years ago he began to suffer from symptoms of partial occlusion of the left nostril. A year subsequently he entered St. Francis Hospital, New York, and came under the care of Dr. J. H. Ripley, who discovered the existence of a small gelatinous polypus attached to the upper margin of the left post-nasal meatus, and who removed the growth by means of the finger introduced into the fauces. The noticeable feature of the operation was the great amount of hemorrhage which followed. The boy shortly after returned to his home relieved of all his symptoms.

A few months afterward there were again evidences of occlusion of the left nostril consequent upon the reappearance of the growth. The latter slowly increased in size and was attended with occasional attacks of severe epistaxis until the patient was brought to me, in April, 1882.

At that time his countenance was considerably disfigured by a protrusion of the left cheek, exophthalmus of left side, swollen and distended nostrils, and by the pouting and opened lips of a mouth-breather (Fig. 1). The left cheek was found to contain in its substance a movable tumor, apparently attached to the anterior edge of the masseter muscle of that side.

On opening the mouth the soft palate was seen to be greatly expanded and to be pressed forward almost to a vertical plane, by a growth behind. The summit of the pharynx was explored by the finger, when a tumor, fibrous in character, was found occupying that region, occluding the left nasal opening posteriorly, extending across the nasal septum into the right posterior nares, and attached to the basilar process of the occipital bone and adjoining left side of the body of the sphenoid.

Examination by the rhinoscopic mirror showed the surface of the tumor to be pinkish in color, smooth and velvety in appearance, more or less globular in shape, and of pronounced vascularity.

Fig. 2.

The hearing of the left ear was not markedly impaired, although it was evident that the mouth of the Eustachian tube of that side was closed by pressure of the growth. There were no signs of disturbance of vision nor derangement or impairment of movements of the left eye. No brain symptoms had shown themselves at any time.

The patient complained of a "stuffy" feeling in his nose and throat, and his mother said that he breathed with great difficulty when asleep, snoring so loudly as to disturb the whole household. At times he would have fits of suffocation, apparently due to mechanical obstruction by the tumor. He had a remarkable toleration for digital exploration of the pharynx, of which repeated advantage was taken in subsequent studies of his case.

[1] Read at the meeting of the Practitioners' Society of New York, June 2, 1882.

With a view of making a thorough examination of the patient under ether, he was admitted to St. Francis Hospital. He took the anæsthetic badly, on account of the partial occlusion of his throat. The previous diagnosis was in the main confirmed by Dr. Ripley, who saw the case at that time and who also made a post-nasal exploration. It was quite plain then, to me at least, that the growth was also attached to the internal plate of the left pterygoid process, and possibly still farther backward and to the left. The tumor in the cheek appeared to be unconnected with that in the naso-pharynx. Still there was a suspicion that the case might be otherwise, and that an extension of the main tumor might have taken place through the spheno-palatine foramen into the spheno-maxillary fossa. Also it was suspected that the antrum might be involved.

Either of these possible conditions was capable of explaining the exophthalmus. The extension of the disease into the cavity of the orbit was, however, not thought to be probable, inasmuch as there was no disturbance of motion or sight of the left eye nor complaint of pain in the course of the nerves most likely to be affected by pressure of a growth taking the usual course thither through the pterygo-maxillary and spheno-maxillary fissures.

The case was carefully studied for a considerable period with a view of perfecting the diagnosis, and of determining the best method of operating for the removal of the growth. At first an osteo-plastic operation was thought of, the plan being to lift the cheek by Ferguson's incision, to split the palate from before backward in the median line, saw through the external portion of the superior maxillary bone, on a level with the floor of the antrum, and hinge the fragment, thus partially separated, outward upon the pterygoid process. It was then believed to be possible, after extirpating the tumor, to replace the bony section. In trying experiments upon the cadaver, I found that this would not answer the purpose. Neither would Cheever's operation, also osteoplastic in character, nor would Vallet's, Nélaton's, or Gussenbauer's.

The size of the tumor, its extensive attachments, and the emergencies of hemorrhage during its removal demanded more room than either of these methods would give.

Partial resection of the jaw, as advised by Maisonneuve, was finally determined upon with preliminary laryngotomy and tamponing of the pharynx. The patient was afterward examined by Drs. J. W. Howe, H. B. Sands, Geo. A. Peters, R. F. Weir, L. Elsberg, F. H. Bosworth, J. D. Bryant, and others. The essential points in the diagnosis were confirmed by these gentlemen. all of whom believed an operation for the removal of the growth, in the manner indicated, advisable.

The operation was accordingly performed at St. Francis Hospital, Saturday, May 27, 1882, with the assistance of Drs. Geo. A. Peters and Joseph W. Howe, and in the presence of Drs. H. B. Sands, R. F. Weir, C. K. Briddon, A. G. Gerster, C. McBurney, J. H. Ripley, Walter R. Gillette, J. D. Bryant, D. H. Goodwillie, and O. B. Douglas, also Dr. David Haig, House Surgeon, and the other members of the house staff. The patient having been cautiously etherized, laryngotomy was performed, a gutta-percha tracheal tube of large size inserted, and the pharynx was tamponed with a sponge attached to a stout string. Anæsthesia was kept up by means of a funnel and india-rubber tube attached to the canula.

Ferguson's incision was made from the inner canthus of the left eye, alongside of nose, around left nostril and through the middle of the upper lip. The flap was then rapidly dissected from the bone, when it was discovered that the tumor in the cheek was continuous with the main growth through an opening in the posterior wall of the antrum.

The lower half of the left upper jaw was next removed in the following manner: The exposed external surface of the bone on a level with the floor of the antrum was grooved by a narrow-bladed saw. This manœuvre was somewhat interfered with by the protrusion of the tumor of the cheek. The left central incisor was next extracted, then an incision made into the mucous membrane of the hard palate from before backward, and at a right angle with this the soft palate was cut transversely from its attachment to the palate bone, the under surface of the tumor being protected from injury by the finger placed between it and the palatal curtain.

The hard palate was divided antero-posteriorly by a bayonet forceps, one blade of which was introduced into the nose and the other into the mouth, and a horizontal section of the upper jaw made also through the nose by inserting the other blade of the forceps into the groove previously made by the saw. The bony fragment was then quickly removed. It was necessary to divide the soft palate in order to expose the surface of the tumor.

The growth was attached to the basilar process of the occipital, the adjoining left portion of the body of the sphenoid, and also the adjacent temporal bone. From this point it extended itself in various directions. It filled the superior vaults of the nose and pharynx, closed up entirely the posterior nares of the left side, and partially occupied that of the right side, straddling the post-nasal septum. In a direction to the left it spread itself to a slight degree behind the left pterygoid process into the pterygoid fossa, and was continuous with the tumor in the cheek by a prolongation into the left spheno-maxillary fossa, doubtless through the spheno-palatine foramen. A portion of the posterior surface of the maxilla had been absorbed, and, through the opening this made, a lobe of the tumor had extended into the cavity of the antrum.

The left inferior turbinated bone had been absorbed, the left nasal cavity was greatly expanded, and the septum was strongly deflected to the right of the median line.

This irregularly-shaped tumor was altogether equal in size to an orange, and its extirpation was attended with unexpected difficulty. Its depending portion was hooked forward by the finger, and by means of a raspator the separation of the posterior portion of the tumor from the basilar process was commenced. I had not proceeded far before I became aware that there was a suspicious elasticity of the bone at that point, and, fearing injury to the medulla by direct pressure of the instrument, I was forced to change the level of separation to that of a plane more directly parallel with the surface of attachment. Accordingly the tumor was attacked on its right side by means of curved scissors, and the separation carried toward the left as far as the under surface of the apex of the petrous portion of the temporal bone. This was done as quickly as was consistent with safety to important structures in the neighborhood. The left spinous process of the sphenoid was used as a guide to the finger in protecting from injury the internal carotid and internal jugular at the base of the skull. After a separation of the tumor in the direction indicated, the portion in the cheek was cut off on a

level with the external surface of the antrum, the left side of the growth was then pulled forward and to the right, and with scissors, doubly curved on the flat, all the attachments were severed. Lastly, the scissors was introduced from before backward, through the nostril into the middle meatus of the nose, and the attachments to the antero-inferior portion of the body of the sphenoid cut away. On examination of the deep and irregular chasm thus left, portions of the growth were found to be still remaining, mostly adherent to the neighborhood of the base of the internal pterygoid plate and the pterygoid fossa of the left side. These were snipped off, and, as far as could be ascertained at the time, every particle of the growth had been removed.

During the operation the hemorrhage, which was mostly venous, was very profuse. From the time the first incision was made alongside of the nose until the base of the tumor was fairly reached, the entire field of the operation was a rapidly filling pool of welling blood. It was only by quick sponging, prompt pressure, and rapid clamping that a necessary view of the deeply seated parts could at any time be obtained. Three arteries only required ligature, the angular, internal maxillary, and the sphenopalatine, which latter was greatly enlarged. Other smaller arteries were simply compressed or twisted to save time.

Early in the operation, and immediately after the extirpation of the upper jaw, the patient's pulse became profoundly impressed, and the extremities were elevated and bandaged in order to keep the blood in the trunk and prevent the imminent dangers of combined shock and hemorrhage. Hypodermics of brandy were also administered. The ether was carefully watched, and during the latter period of the operation entirely suspended. Just before removing the last portion of the growth the patient became quite restless, so that one of the gentlemen present suggested that more ether be given. This, however, was not done.

The whole period of the operation was scarcely thirty minutes. At its completion, it became apparent that the patient was in an extremely feeble condition. He soon passed into a state of collapse and died within an hour after the operation. Although the apparatus for transfusion was held in readiness by Prof. Howe, no opportunity for performing the operation was afforded on account of the suddenness of the death.

The result was quite unexpected to me, and I anxiously looked forward to the autopsy for its explanation. It did not seem that the loss of blood, great as it was, was the sole cause of death. I feared that some of the important nerves at the base of the brain, or perhaps the brain itself, had been injured. It did not seem impossible that the cribriform plate of the ethmoid had been fractured by crowding the vomer to one side in extracting the anterior and upper section of the tumor.

The post-mortem examination was made twenty-four hours afterward by Dr. E. C. Wendt; Dr. Ripley, myself, and members of the house staff being present. The lungs contained considerable blood, as did also the stomach. This was partly caused by the accidental and temporary displacement of the sponge tampon during the operation, and partly by soakage through the sponge itself. All the other organs of the body were healthy except the brain. To the under surface of the left middle lobe of the cerebrum there was found attached, by inflammatory adhesions, a fibrous tumor the size of a horse-chestnut (Fig. 3). The under portion of this intra-cranial growth rested into the enlarged foramen lacerum medium of that side, and was evidently continuous with the naso-pharyngeal tumor, the separation from the latter made at the operation being in a plane with the base of the skull. It may be remarked in passing that the extension of the disease in this direction is rare, the usual avenue to the brain being either through the sphenoidal sinuses or cribriform plate of the ethmoid. The floor of the cranial cavity and vicinity was found to have escaped injury save at the foramen lacerum medium, which was enlarged by absorption of its bony margins. The pneumogastric nerve and the larger vessels of the throat were also uninjured. The basilar process of the occipital was very much thinned by absorption, readily yielded to pressure of the finger, but showed no sign of injury upon its intra-cranial surface. The cavity of the orbit was not encroached upon by the growth. The exophthalmus was partly the result of pressure upward from the portion of tumor in the antrum and partly from a crowding of the growth into the sphenomaxillary fossa. The tumor was a fibro-sarcoma.

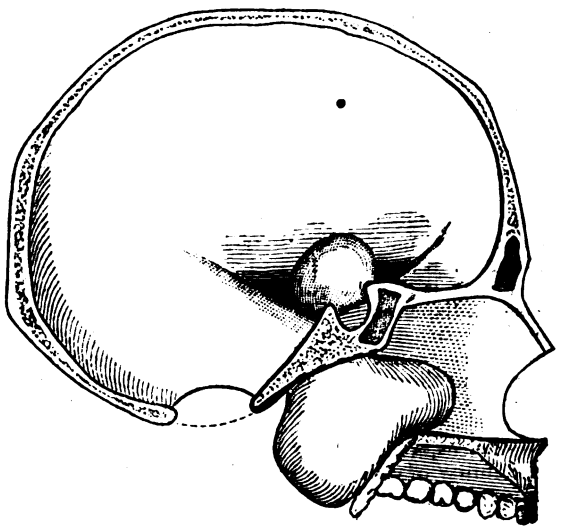


FIG. 3.—Showing attachment of tumor to basilar process and sphenoid, and extension of growth into cranial cavity.

The history of this case and the results of the operation offer several points for study and reflection. Altogether it adds an instructive chapter of experience to the radical treatment of a formidable disease. It proves, in a striking manner, the impossibility of making a diagnosis of the actual limit of naso-pharyngeal polypi of large size. If brain complication had manifested itself by any symptom during life, the operation would, of course, never have been undertaken. None of the skilled surgeons and laryngologists who examined the case suspected such a condition. The extensive attachment of the tumor to the base of the skull, including, on one side at least, every available portion of surface, is a matter worthy of notice. It does not seem improbable that the growth had a common origin from the basilar process of the occipital, the body of the sphenoid, the pterygoid fossa, and the apex of the petrosal pyramid. Certainly, to all these points it was intimately adherent.

It is a question of interest how much the toleration of digital exploration was due to the involvement of

Meckel's ganglion, and of the palatine branches of the superior maxillary nerve, by extension of the disease in the spheno-maxillary fossa.

The kind of operation was decided upon after the most mature deliberation. Every precaution was taken to secure a good result, but in vain. The existence of the partially absorbed basilar process was not ascertained until the time came for attacking the base of the tumor itself. Thus, what would have been a comparatively easy and quick way of extirpating the growth had to be substituted in the emergency for another beset with difficulties.

It was plainly a case in which neither the ordinary loop nor the galvano-cautery wire could have been used. Apparatus (Piffard's) for such purpose was in readiness at the time of the operation, but there was no possible chance, even after extirpation of the jaw, for surrounding the base of the tumor. The particular method of partial removal of the jaw is, I think, the best that can be employed when the tumor is large and its attachment extensive. It affords the freest access to all parts involved in the disease with the least external deformity, and gives ample facilities for after-treatment in case of recurrence.

Laryngotomy was determined upon as a preliminary procedure, on the general ground of increased safety to the patient, but more especially in view of the experience of Dr. Weir, who, during the performance of Nélaton's operation for the removal of a naso-pharyngeal polypus, was compelled to tracheotomize his patient in a trying emergency (vide MEDICAL RECORD, Vol. XXI., p. 608). I am satisfied that it is not only warrantable, but in most cases indispensable. It must be admitted that the entire extirpation of the growth is the only chance of ultimate cure. The ecraseur, the galvano-cautery wire, and the wire snare give no absolute guarantee that the root of the growth is removed. In fact, aside from the difficulty of adjusting the necessary appliances, and, in large growths, the absolute impossibility of doing so, there is the insurmountable objection of working more or less in the dark. As palliative measures for the relief of urgent symptoms when radical means are not available, they certainly, in many cases, serve a good purpose.

Profuse hemorrhage is the rule in the radical operations, and is the chief source of danger. The larger the growth, the more extensive its attachments, and the more numerous its prolongations, the greater the risk. As is well known, the origin of these tumors is in the thick and highly vascular mucous membrane and periosteum covering the basilar process and surrounding parts. Although the substance of the tumor is not very plentifully supplied with blood, the contrary is the case with its investing membrane. Also its situation, manner of growth, and surroundings favor a varicose condition of the veins in and about the summit of the pharynx, notably those of the venous plexuses which go to form the pharyngeal and vertebral veins. Although the larger part of the hemorrhage is venous in character, the various branches of the internal maxillary—the pterygo-palatine, spheno-palatine, and others—supplying the parts and involved in the disease are apt to give trouble. When the mass encroaches upon the spheno-maxillary fossa, the trunk of the internal maxillary itself is liable to be wounded. The only way that suggests itself of reducing the danger to the minimum is to operate as rapidly as possible after the jaw is attacked, exposing and extirpating the tumor with the least possible delay. Much blood may be saved by care in securing all the bleeding vessels in the section of the cheek before taking the next step in the operation. But in certain cases, as in the present, where numerous complications exist, it may be impossible to keep the hemorrhage under safe control. Much in the way of satisfactory result must necessarily depend upon the certainty of diagnosis and the proper selection of the subjects for operation. How such can always be made is still an open question.

247 LEXINGTON AVENUE, NEW YORK.

THE VALUE OF CARBOLIC ACID AS A GERMICIDE AS ESTABLISHED BY EXPERIMENTAL DATA.

BY GEORGE M. STERNBERG, M.D.,
SURGEON, U. S. A.

THAT germicides are destined to occupy an important place in the therapeutics of the future can scarcely be doubted. But that the etiological problems relating to infectious diseases are *now* definitely settled and the germ theory established upon a firm experimental basis, and that the method Déclat, which is based upon this supposition, has inaugurated a therapeutic millennium, is open to legitimate question.

The writer has no quarrel with carbolic acid or with the method Déclat, but having been vigorously assailed by Dr. Déclat in a letter occupying a column and a half of the *Courrier de San Francisco*, July 20, 1882, for certain remarks made in an address before the California Academy of Sciences (in which Dr. Déclat's name was not mentioned and his method of administering carbolic acid not referred to), and being unwilling to discuss a scientific medical question in a daily newspaper, especially in one where Dr. Déclat would have the double advantage of addressing his French compatriots in their own language and of advertising his cure-all without expense, I have thought it proper to publish the experimental data upon which the remarks were founded which have called forth from Dr. Déclat the letter referred to.

My remarks with reference to the use of carbolic acid as a germicide were quite brief and incidental to the subject of my address, which related to unicellular organisms generally and the bacteria in particular. I stated that the value of carbolic acid as a germicide had been pretty definitely fixed at from one to two per cent., and that it seemed impracticable to destroy micro-organisms in the blood of a sick person with this agent, inasmuch as the quantity required to accomplish this would be enormous and far beyond the toxic dose.

Physiologists estimate the blood to constitute one-eighth of the weight of the body, which for a man weighing one hundred and sixty pounds would amount to twenty pounds. One per cent. of this would be one-fifth of a pound, or three and one-fifth ounces.

It is evident that such a calculation can only be considered suggestive, and that a much smaller quantity may have a potent therapeutic effect by restricting the multiplication of germs and thus giving nature the opportunity to effect their destruction or elimination from the body.

It seems proper that my reply to Dr. Déclat should be published in THE MEDICAL RECORD, inasmuch as his method has already received some notice in this journal.

The question whether the carbolic acid "*naissant*"

especially prepared by Dr. Déclat's agents possesses advantages over that which I have used in the experiments recorded below I must leave for the chemists. The acid used by me in my last experiments was put up by Schieffelin & Co., of New York, for the Medical Department of the army. It is contained in pound bottles, in the form of a colorless crystalline mass, and remains solid at the ordinary summer temperature of this place—62°–65°.

There is no doubt that the real value of a therapeutic agent can only be definitely settled by clinical experience, and that theory, experiments upon the lower animals, and laboratory experiments upon micro-organisms are only useful in establishing a basis for clinical experiments. But all physicians know how often these lead to contradictory results or false conclusions, and how necessary it is to withhold our judgment with reference to a certain mode of treatment until we have for consideration extended data, furnished by numerous independent observers. The enthusiasm of the discoverer of a new remedy, the fact that its administration is in accordance with the pet theory of the day, and the potent influence of the *vis medicatrix naturæ* are factors which have not infrequently established for a time the reputation of drugs which have subsequently turned out to be of little or no value. The value of carbolic acid as a germicide, and as a local application in surgical practice, is, I conceive, fully established, and that it may have a somewhat extended and useful place in internal medication seems to me very probable. But that the claims of Dr. Déclat will be fully justified I very much doubt in view of the experimental data recorded below.

The writer commenced experimenting with disinfectants in 1876, and his published results may be found in the "Bulletin of the National Board of Health," vol. i., pp. 219, 227, 287, 363, and vol. iii., pp. 21–23. Referring the reader to these reports for details, and passing by my experiments with carbolic acid as a volatile disinfectant, I call attention especially to the results obtained in Baltimore last year (*vide* "Bulletin National Board of Health," vol. iii., p. 21, and also "Studies from Biological Laboratory, Johns Hopkins University," vol. ii., No. 2, pp. 201–212), as compared with those recently obtained by a different method reported below.

In Baltimore the test employed was destruction of virulence in blood from a septicæmic rabbit, which was proved by repeated experiments to be fatal to other rabbits when introduced beneath their skin in the smallest quantity. A fraction of a drop of this blood, not disinfected, would infallibly kill a healthy rabbit, but when treated with a certain proportion of various agents, commonly recognized as "antiseptics," this blood lost its virulence and could be introduced beneath the skin of a rabbit in much greater quantity—twenty minims or more—without producing any perceptible effect. Twenty minutes was allowed for the action of the disinfectant before injecting the blood into the subcutaneous connective tissue of a healthy rabbit as a test of virulence. The result, so far as carbolic acid was concerned, was that 0.5 per cent. failed to destroy virulence, as proved by the speedy death of the rabbit operated upon, while injections of septic blood treated with 1.25 per cent. and 2.5 per cent. were without effect. Other substances, including iodine and the mineral acids, were effectual in smaller quantities (*e.g.*, iodine, 0.2 per cent.; nitric acid, 0.25 per cent.).

In my recent experiments the same agents have been tested with reference to their power to destroy the vitality of certain micro-organisms, as proved by failure to multiply when introduced into a suitable culture-fluid (sterilized by heat), and placed in a culture-oven for twenty-four hours longer at a temperature of 100° Fahrenheit.

EXPERIMENT I., July 18, 1882.—A sufficient quantity of a standard 4 per cent. solution of carbolic acid (pure) was added to four separate portions of beef-tea containing a micrococcus obtained by cultivation from gonorrhœal pus (eighteen culture) to amount to 2 per cent. in No. 1, 1.25 per cent. in No. 2, 0.8 per cent. in No. 3, and 0.5 per cent. in No. 4. After allowing two hours for the action of the disinfectant, a culture-tube[1] was inoculated from each portion and into the culture-oven.

Result.—The following day Nos. 1, 2, and 3 were found to be transparent and unchanged, while No. 4—0.5 per cent.—had "broken down," and upon microscopical examination proved to contain an abundance of micrococci in pairs—figure of 8—like those used in inoculating the culture-fluid. Nos. 1, 2, and 3 were returned to the culture-oven, and at the end of two and a half days still remained unchanged. They were then inoculated with the same micrococcus from a fresh culture and returned to the oven. In six hours they had completely "broken down."

EXPERIMENT II., July 31st.—In the same way as in the preceding experiment, two tubes were inoculated with beef-tea, containing the same micrococcus, No. 1 exposed to the action of carbolic acid in the proportion of 1 per cent. and No. 2 in the proportion of 0.5 per cent.; time of exposure, two hours. The following day No. 2—0.5 per cent.—had broken down and No. 1 remained unchanged.

EXPERIMENT III.—The above experiment was repeated, using a fluid containing an abundance of *bacterium termo* in place of the micrococcus used in preceding experiments. The experiment was made in duplicate as follows: Time of exposure to disinfectant, two hours. Two tubes inoculated from No. 1—1 per cent. of disinfectant, two tubes from No. 2—0.5 per cent. of disinfectant, and two tubes from No. 3—0.2 per cent. of disinfectant. At the end of twenty-four hours the first two tubes remained unchanged, while the others had all broken down.

The results of these experiments, with two different micro-organisms—*bacterium termo* and a micrococcus from gonorrhœal pus[2]—conform in a remarkable manner with those previously obtained by the test upon a healthy rabbit of septicæmic blood treated and injected as already stated. This correspondence gives strong support to the view maintained in my paper relating to this form of septicæmia,[3] upon experimental evidence of a different kind, which ascribes the virulence of the fluid to the presence of a micrococcus constantly found in it.

If the virulence of the septic blood were independent of the living organisms present in it, the coincidence pointed out would be very remarkable in the case of a single antiseptic agent, and quite beyond the range of probability if found to be true for several.

---

[1] For the writer's method of conducting culture experiments see paper read before the American Association for Advancement of Science, Trans. 1881, also published in Studies from Biological Laboratory, Johns Hopkins University, vol. ii., No. 2, p. 165.

[2] I am engaged in a study of this micrococcus with reference to the question of its possible relation to the virulence of gonorrhœal pus, and will soon be ready to publish my results.

[3] A Fatal Form of Septicæmia, etc. Bulletin Nat. Board of Health April 30, 1881.

I propose to pursue this line of inquiry, and have already found a like correspondence in the results obtained by the two methods in the case of several other antiseptic agents. Thus, in my experiments with septicæmic blood, iodine failed to disinfect in the proportion of 0.1 per cent., but was successful in the proportion of 0.2 per cent. and above. In a recent experiment with this agent the vitality of the micrococcus (from gonorrhœal pus) was not destroyed by 0.1 per cent., but was destroyed by 0.2 per cent. and by 0.5 per cent.

Are we justified in assuming that hypothetical or demonstrated disease-germs would be destroyed by the same agents and in the same amount as are found to be effectual in destroying the micro-organisms used in these laboratory experiments? I think not, and it may be that among these lowly organisms, as among higher plants and vertebrate animals, what is destructive in one case is harmless in another. This certainly is true as regards the thermal death-point of different species, and also as regards the action of germicides upon the same species in different stages of its development. Thus Koch found that contact with a 2 per cent. solution of carbolic acid for three days only hindered the development of anthrax spores without destroying their vitality, while *a one per cent. solution killed the bacilli in a few minutes.* Again the experiments of Arloing, Cornevin, and Thomas[1] upon the virus of symptomatic anthrax show that in a dried condition this virus resists the action of antiseptic agents much better than in a fresh state. The dried virus was, however, destroyed by a 2 per cent. solution of carbolic acid.

In the experiments heretofore detailed, the object in view has been to determine the minimum quantity of carbolic acid which can be depended upon to destroy micro-organisms. But in judging of the therapeutic value of this agent it is evident that the minimum quantity which will prevent their development in a suitable culture-fluid is a more important question and one which must be settled independently, for, *a priori*, it seems very probable that the amount required to completely destroy vitality may be considerably less than is necessary to restrict reproductive activity.

Experiment shows a decided difference in this respect, but this is less than might have been anticipated.

Experiment IV., August 3, 1882.—Sterilized beef-tea containing carbolic acid in the proportion of 0.2 per cent., 0.1 per cent., and 0.5 per cent. was introduced into culture-tubes and these were inoculated with the micrococcus from gonorrhœal pus (twenty-fifth culture) and, separate tubes, with *bacterium termo* in "broken-down" beef-tea.

These tubes were placed in the culture-oven for twenty-four hours, at the expiration of which time it was found that both of the tubes containing 0.2 per cent. of the disinfectant were unchanged, while those containing 0.1 per cent. and 0.5 per cent. had broken down both with the micrococcus and with *bacterium termo.*

Experiment V., August 4th.—The above experiment was repeated with the micrococcus with an identical result, viz.: the organism multiplied abundantly in the solutions containing 0.1 per cent. and 0.5 per cent., but the solution containing 0.2 per cent. remained unchanged.

I find in a recent report to the Committee of Agriculture (Annual Report, Department of Agriculture, 1880) a record of similar experiments by D. E. Salmon, D.V.M., made during an investigation relating to the etiology of swine-plague and of fowl-cholera. A micrococcus was found in the blood of pigs suffering from swine-plague, which, according to the experiments of this observer, multiplied abundantly in urine containing one per cent. of carbolic acid, but not in the same fluid containing two per cent. of this agent. The micrococcus of chicken-cholera was destroyed by a one per cent. solution of carbolic acid, acting for six hours, as shown by loss of virulence in the fluid containing it—proved by inoculation experiments on fowls.

Many other experiments have been made in various parts of the world to determine the power of carbolic acid as a germicide, but the limits of this paper do not permit an extended account of these, and an abstract of results would be unprofitable unless accompanied by a critical study of the methods employed.

If we now make a new calculation from the experimental data given, as to the amount of pure carbolic acid required to prevent the multiplication of micro-organisms in the blood of a man weighing one hundred and sixty pounds, we shall find it to be 0.2 per cent., nearly three-fourths of an ounce (.72), or about four drachms. That is, this amount should be constantly present in the circulating fluid to prevent the multiplication in it of the micro-organisms which have been the subject of our experiments, *if the conditions were favorable* for the growth of these organisms in the living body. But just here the objection will be raised that the living body differs from a culture-flask in our laboratory in that vital processes come into play, which, under ordinary circumstances are sufficient to dispose of *microbes* such as these, even when they are directly introduced into the circulation (this experiment I have several times made upon the dog with *bacterium termo*), and in the case of specific febrile diseases this vital resistance of the living body to the morbific germs (?) of each is in some way reinforced by a non-fatal attack of any one of them. May it not be, then, that much smaller doses of carbolic acid will be useful in reinforcing the vital resistance of the human body? I cannot gainsay this in the absence of experimental evidence upon living animals, but, *a priori*, I should say no, inasmuch as the presence of 0.1 per cent. of carbolic acid in my culture-solutions appears to have *no effect* in restraining the development of the micro-organisms in question. They multiply as rapidly, and the motions of *bacterium termo* are as vigorous in these as in culture-fluids, quite free from any trace of this agent.

Dr. Déclat may properly claim that the power of carbolic acid as a germicide in the case of one or two of these micro-organisms is not evidence as to its power in the case of others—*e.g.*, the hypothetical germs of malarial or of yellow fever. I admit this, but point to the fact that our experimental data include the action of this agent upon several morbific germs, viz.: the micrococcus of septicæmia in the rabbit (author's experiments), the bacillus of anthrax (Koch), the bacterium of symptomatic anthrax (Arloing, Cornevin, and Thomas), and the micrococci of swine-plague and of chicken-cholera (Salmon).

Moreover, the power of carbolic acid as a germicide has been established by experiments upon these microbes, and not, so far as I know, by the individual researches of Dr. Déclat, who, however, seems

[1] Lyons Médicale. Abstract in London Lancet of July 1, 1882.

to infer, from this kind of evidence, that carbolic acid—his preparation—is a cure-all for germ diseases generally. As stated at the outset of this paper, this is a question which must be settled by clinical evidence, and I, for one, will be well pleased if a universal panacea for germ diseases has been found. But for the present I prefer to administer quinine to my malarial fever patients, rather than to resort to hypodermic injections of carbolic acid, as I am advised to do by Dr. Déclat in his letter to the *Courrier de San Francisco*. My reason for this is two-fold. First, I am well satisfied with the results which I have heretofore obtained by the use of quinine; and, second, I am not well satisfied of the truth of the hypothesis upon which Dr. Déclat advocates the hypodermic administration of carbolic acid in this disease. Dr. Déclat intimates in his letter that it is my own fault that I have sought in vain for the yellow-fever germ and for the microbes which have been demonstrated to be the cause of malarial fevers "by Salisbury of Ohio, Tomassi of Rome, and Klebs of Prague." I beg leave to inquire whether Dr. Déclat has himself demonstrated the presence of these organisms in the blood of patients sick with the diseases in question. If not, how can he be satisfied to announce their existence in such positive terms without having first verified the fact by personal observation? I would also respectfully suggest to some of the writers and teachers in this country, who are very ready to give credence to the alleged discoveries of foreign *savants*, that we have malarial fever cases in abundance at home, that good microscopes are easily obtained, and that Dr. Smith or Dr. Jones should be able to see the bacillus of Klebs and Tomassi-Crudelli, if it is really present in the blood and bears a causal relation to this disease. Let us, then, have the *bacillus malariæ* demonstrated to the medical students who are taught that it is the cause of the widely spread malarial diseases which they will soon be called upon to treat, just as they are taught by ocular demonstration the fundamental facts in anatomy, histology, and pathology.

The possibility that the germs of malarial fever locate themselves in the alimentary canal, rather than in the circulating fluid, has, in my opinion, more facts in its favor, and it certainly offers a better chance for the successful application of Dr. Déclat's remedy. Not hypodermically, however, as this would seem to be a roundabout way; and I scarcely credit the story told me by a medical friend in this city to the effect that Dr. Déclat administered carbolic acid to a patient here, by the hypodermic method, for the cure of gonorrhœa.

It seems not at all improbable that we may successfully employ germicides for the destruction of pathogenic organisms in the alimentary canal, and I strongly suspect that the *modus operandi* of some of our most important remedies is to be explained in this way. The beneficial results obtained by sweeping out this long and narrow passage with emetics and cathartics—a method of sanitary policing which had great credit with our predecessors, and is, perhaps, not sufficiently employed at the present day—may also be due to the removal of pathogenic organisms *en masse*, rather than to the fact that we also get rid of "vitiated secretions," which are, perhaps, in many cases vitiated by the action of these living ferments, rather than by the abnormal performance of the cellular elements of the mucous membrane and excretory glands.

But from this point of view we may well inquire whether other efficient germicides, including such standard remedies as the mineral acids, the salts of iron and of mercury, iodine, etc., may not have a place in our therapeutic resources quite as important as that which Dr. Déclat would have us give his favorite remedy.

Finally, I beg leave to quote, without comment, as this paper has already extended to a much greater length than I had anticipated, a recent case of carbolic acid poisoning.

"A case of poisoning by carbolic acid occurred in my practice on May 16th. A housemaid, aged fourteen, after being reprimanded by her mistress, swallowed, intentionally, as nearly as I could ascertain, about six drachms of the undiluted acid. I saw her twenty minutes afterward, when she was breathing stertorously; her face was livid, as if she had taken an overdose of chloral; her pulse was small and irregular; she was quite comatose, and the pupils firmly contracted, but not so small as in opium-poisoning. With the assistance of my friend Dr. Gibson, I washed out the stomach thoroughly with soap and water, and also milk and water; and after persevering for nearly an hour, the lividity became less and consciousness slowly returned, and two days afterward she was able to be sent to her home in the country.

"From the above facts we must infer that carbolic acid is a powerful narcotic, and rapidly absorbed; but, from its volatility, the injurious effects pass off, if it can be quickly removed from the stomach by the stomach-pump. *It did not appear to act as an irritant*, as the girl did not complain of any gastric discomfort afterward."[1] (R. H. Wilbe, Finchley Road, London; from *British Medical Journal* of June 21, 1882, p. 939).

THE EQUILIBRATING VALUE OF NERVOUS CONTROL.

By J. T. SEARCY, A.M., M.D.,

TUSCALOOSA, ALA.

I beg leave to offer the following thoughts, in reference to certain functions of the nervous system, that I regard as fundamental facts in modern medicine.

I think the *equilibrating* value of nervous control in the human body, viewed in the light of modern physiology, is a fact that is not sufficiently appreciated, and not brought forward to its relative rank and importance. It is *the* function in the living organization of the greatest value. If we regard the nervous system in the light of its essentiality in preserving or controlling the healthy actions in the body, and in the light of its potentiality in transmitting disturbing actions, its *equilibration* comes forward as its most important function.

In illustration of such a position, the following line of argument suggests itself.

In all exhibitions of life, wherever we observe it, the essential phenomenon is, always, *action*.

The amount of action there is constantly and continuously in progress in the human body is immense. In the lowest forms of life structure is simple and action is simple. In the body of man there are many kinds of structure and a great variety of actions, and the necessity for a nervous system uniting and controlling them is apparent. Looking at them all in the

[1] We have no reason to suppose that the acid swallowed in this case was Dr. Déclat's special preparation, and it is evident that the pure acid may be given *per orem* in a proper dose without injurious effects.

aggregate, we can form some idea of the *amount of action* there is by observing the amount of machinery in constant action, preparing and furnishing material to support these actions, and also it is shown by the amount of machinery necessary to remove the waste products resulting from such actions. The amount of material consumed and the amount of material thrown off also indicate the amount of constant action.

For convenience, it is easy to divide the actions of the body into *nutritive* and *functional*. The one embracing the processes relating to cell-life; the other the processes relating to the part the cell plays in the economy.

In the human body the complexity of structures and of actions is very great. The complexity of the nervous system exceeds the complexity of other parts of the body. It has functions corresponding to every other function and peculiar functions of its own. The divisions of it into cerebral, spinal, sympathetic, vaso motor, etc., are by no means well defined. They overlap and intermix by their multiplied connections to such an extent that the nervous system is a whole, and is very rightly called a whole. Its tendrils permeate in every direction, penetrating the tissues, arborating into every cellular structure until probably more perfectly than the vascular system, or connective tissue, if isolated, it would represent fully the figure of the body. The complexity of the cerebral portion of the nervous system is so great that physiologists are lost in the labyrinth. Connecting fibrils cross each other in all directions, uniting parts with each other in such a maze of minute complexity that practically every cell seems connected with every other; parts apparently of different functional action are united closely. What can be said of this portion of this system, more completely isolated, can be said of the rest, to a less complex degree.

The entirety of the body is a fact we are very much given to overlooking. So much is our attention directed to parts and portions that we overlook this as a fact, or neglect the importance of constantly considering it. In our text books and in our current literature we neglect, I think, the consideration of this fact: that the body is a whole, and especially the fact that it is made whole, in its living actions particularly, through the intimate and multiplied connections of the nervous system. The extreme multiplicity of these connections would warrant such an assertion or belief, if it were not corroborated by other facts.

Noting, then, as a fact, almost self-evident, the immense amount of action there is constantly going on in the body, nutritive and functional, and coupling this fact with the intimate and multiplied connections of the nervous system, we are prepared to appreciate the other very essential and fundamental fact that the nervous system is a medium of transmitting motion or action, of harmonizing, balancing, equilibrating this general action until the body is a grand and a complete community of action. This is a fact, the value of which, the practical everyday value of which, I don't think is sufficiently appreciated. If we bear it constantly in mind, it will help us to explain many phenomena we witness—much of physiology, many of the disturbed or diseased conditions, and much of our therapeutics.

With this sort of an understanding of what is going on, constantly and continuously, in the living body, we can readily describe *health* as a harmonious condition of action everywhere, all equilibrated. In health the structures are normal, according to function, and the actions natural, in accordance with structure and function. The local actions everywhere are not disturbed or disturbing, and the transmitted actions are harmonious, not disturbing, and easily equilibrated or controlled. Our consciousness of such actions is pleasant and agreeable.

Indeed, *physically considered*, we can define *consciousness* as the resultant, the summating in intellectual brain action, of all the actions brought to it from all parts. When harmonious, agreeable to intellectual action, our consciousness is pleasant. If there comes disturbing action from any source our consciousness is disturbed.

Pain can be defined under this sort of an understanding as disturbing action transmitted from the disturbed part to centres of sensation; or, more properly, pain is a disturbed action of the centres of sensation. Defectiveness of structure and of functional action, disease in the centres themselves may give rise to pain, without the disturbance being transmitted to them.

Under this sort of an understanding we can define *disease*, anywhere, as a disturbance of structure and of action, whether the disturbance go so far as to make structural changes *visible to the eye or not*.

In accordance with the nerve-connections of a part, and the importance of its functional actions, will disturbing action be transmitted from it to nerve-centres and to the rest of the body. The degree and character of the local disease, *i.e.*, the degree and character of the local disturbance of structure and of action, will characterize the transmitted action.

In inflammation in any part, characterized by the local phenomena, much studied and elaborated nowadays, the action that is transmitted is disturbing in many particulars. Disturbance is shown in cerebral action. Intellectual brain action often shows disturbance; co-ordination and control of muscular action shows disturbance; sensory tracts are disturbed and pain results; the nerve-centres that regulate the production and reduction of heat show disturbance and fever results; general cellular action, nutrition, is disturbed. Because of the transmission of disturbing action, there is disturbance of the various vital actions of the body, respiration and circulation, and the like; general equilibrating control is lost, or, rather, disturbed.

In severe local inflammations the transmitted disturbance is so severe as to jeopardize the general equilibration of the various actions, and if it go far enough it may entirely cessate actions in these principal centres and the man die—action everywhere stop.

It is impossible to explain all the general conditions of disturbance in disease through the vascular system. You can admit all that can be shown to result from the distribution of morbific material by the circulation, and then not have gone half way in explanation of the phenomena. Bile, carbonic acid, urea, or any other waste products, or the germs of disease, may make disturbing action wher ever they reach parts; and because so generally distributed may produce a general disturbance, but the transmission through nervous action of the disturbance thus created has to be allowed, even in these general distributions of disturbing agents, before our explanation of the phenomena will be complete.

The various "sympathetic" and "reflex" ac-

tions observed in the body is much easier explained as a transference, by nerve connections, not of the natural harmonious action constant in health, but of disturbing action, and such action produces in connected parts disturbance of nutritive or functional action, or both.

It is astonishing how much of our therapeutics can be explained on such principles—the most satisfactory and successful of all our therapeutics.

Take a man laboring from inflammatory action in any important part. It is not necessary to understand all the cellular processes supervening in the inflammatory action. The structure and the actions, nutritive and functional, of the part are disturbed, and disturbance is transmitted, the action in principal nerve-centres is disturbed, and general disturbance is transmitted. His centres of sensation are disturbed and he has pain; his centres of muscular control, of cerebral action, and of the general vegetative processes are disturbed. He has to lie down, because in that way he gets rid of a great deal of voluntary action that tends to heighten the disturbance. He abates all the muscular and mental action he can. He does all he can to *equilibrate* the general disturbance. "To lie down and keep quiet" is the first rule under any general disturbance, especially when the disturbance is of such a character as to injure control of the processes that regulate temperature. "When a man has fever he ought to lie down," is a maxim. Probably, keeping as quiet as he can is all that will be needed for our patient. If that is not sufficient, we can help him often, or sometimes. We cannot emphasize too much the advantage of cessating all the action the patient can voluntarily.

How do we usually help medicinally such conditions as these?

In our materia medica we have a long list of agents, with which *in health and in disease* we can, to a greater or less extent, paralyze, stop action in nerve-centres. In health, we can abate, or entirely cessate the action constantly going on in these centres by the administration of such drugs, and we do the same in the time of disease or disturbance. Our medicines act in the same way all the time. The very best medicines we have, the ones we most frequently use, the ones we all carry about with us for immediate and confidential use, are of this character. Take opium, the medicine more frequently used than any other in some one of its forms. In health we can produce in nerve-centres, particularly sensory centres, every stage of abated, cessated, or paralyzed action by the administration of different-sized doses. We can completely paralyze the centres with it, stop the natural, constant action, and death ensues—or a cessation of all action in the body. In times of disease, or transmission of disturbing action to these centres, how excellent is the effect of paralyzing these centres, so that the disturbance is abated there, or pain stopped, and the transmission of the disturbing action prevented. What would we take for our opium in times of such disturbance! It is well, though, to bear constantly in mind, how we are accomplishing the good. We can give it in health when it is not needed, for the pleasurable feeling it produces, and by constant administration damage and disease these important centres; and we can in the time of disturbance overdose, completely stop action, and kill our patient.

I select opium as a very good example of what we may call an *equilibrating* medicine, but the whole list of anodynes and anæsthetics exhibits this property as their principal mode of action, and there are others not usually so classed.

The actions in centres of consciousness and sensation seem peculiarly susceptible to the paralyzing effect of anodynes and anæsthetics because of their extreme sensitiveness, their excessive complexity, their high order of development, if you want to put it.

How often in our therapeutics we resort to the use of medicines that have effect in abating action in nerve-centres we have only to have our attention directed to the fact to observe. Take, for instance, among the anodynes, the various forms of the opiates, hyoscyamus, cannabis indica, camphor, assafœtida, stramonium, etc. Among the anæsthetics, alcohol, "the grand prototype of all anæsthetics," chloroform, chloral, ether, amyl, nitrous oxide, etc. And then there are a number of medicines like quinine, the salicylates, the bromides, to some extent the iodides, digitalis, aconite, etc., that evidently abate action, when administered in sufficient doses in nerve-centres not sensory. Most excellently they come in when indicated.

I have probably illustrated enough to show the value of nerve-equilibration. Recognizing in acute diseases, "inflammatory" disturbances, the nervous system as the medium of transmitting disturbing actions, we readily see how such agents as in health have effect to abate action in principal nerve-centres, will, in disease, be excellent to stop or quiet the disturbance in these centres and the transmission of it through them. We can use them like the policeman does his cudgel, to suppress the leaders and quiet the row, or prevent the transmission of excitement.

When we recognize the controlling, balancing, *equilibrating* value of the nervous system so far as all the various functional actions are concerned, and also so far as the constant, continuous, cellular, nutritive processes are concerned in the body, we have a key to many of the phenomena in health, in disturbance or disease, and to many of our efforts in therapeutics. We ought to keep these facts constantly before us.

The equilibrating value of nervous control is a fundamental principle, around which much of the "philosophy of medicine" rotates.

Anatomical Proportions.—A man in his infancy has the breadth of his shoulders equal to the length of the face, and to the length of the arm from the shoulder to the elbow, when the arm is bent. It is the same again from the lower belly to the knee, and from the knee to the foot. But when a man is arrived at the period of his full growth, every one of these dimensions become double in length, except the face, which, with the top of the head, undergoes but very little alteration in length. A well-proportioned and full-grown man, therefore, is ten times the length of his face; the breadth of his shoulders will be two faces; and in like manner all the above lengths will be doubled.—*Students' Journal*, July 15, 1882.

Facial Liniments.—It was Dr. Oliver Wendell Holmes, we are told, to whom, as he was waiting for a prescription, the druggist said: "That is my son, sir, sitting by you; don't you think he looks like me?" "Well, yes," replied the poet; "I think I can see some of your liniments in his face."—*Drug Circular*.

IMPERFECT NUTRITION IN INFANTS.[1]

By E. M. HERMANN, M.D.,

YONKERS, N. Y.

My attention has of late been called to a condition of non-assimilation of food in infants, which I have denominated as above.

This pathological condition may perhaps be already familiar to some, but after carefully searching the works of the most eminent writers on "Diseases of Children," as for instance: Smith, Vogel, Ellis, Meigs and Pepper, Dewees, Underwood, Meadows, Bouchut, Hillier, Keating, and others I find no mention of it.

The only allusion to it I can anywhere find is in West's work. He devotes only a few lines to it, stating that such a disease is sometimes met with, and applying to it the term "the atrophy of infants." We, however, have not made use of this term, because we are convinced that the disease is not so much one of wasting of the tissues, as it is a lack of development produced by imperfect nutrition. This condition is often seen in connection with tuberculosis, rachitis, scrofulosis, etc., as a result of these morbid processes, but as a disease *per se* we are forced to the conclusion that it is of rare occurrence.

The following cases are examples of the disease in question:

Case I.—Homer C——, aged fourteen months. This child first came under my observation two years ago. He was then fourteen months old and weighed nine pounds—at birth he weighed five pounds. The child was thin, the skin was wrinkled and seemed to possess no elasticity, tissues soft and flaccid, child cried and worried almost constantly; vomited some, was restless at night and constipated.

These are about all the symptoms which the case presented; there was no evidence of any cerebral affection—the pupils were normal, and the child appeared bright and intelligent, the lungs were sound, and the kidneys acting normally.

In short, by excluding all diseases, we were forced to the conclusion that it was simply a case of imperfect nutrition. There were only three prominent symptoms, viz.: constipation, restlessness, and non-development.

Upon inquiry it was ascertained that the child had been treated for the constipation by all the physicians to whom the mother had applied.

The condition of the child was explained to the mother, and oleum morrhuæ ordered in ten-drop doses *tris in die*, to be increased five drops at a dose each week until the child was taking ʒ j. t. i. d. Oleum morrhuæ was also ordered by inunction morning and night, and the further use of cathartics was strictly prohibited. This, with an occasional dose of potassium bromide, constituted the treatment throughout. The little patient very soon began to improve, and in two weeks the bowels were perfectly regular, and the child began to gain flesh and has continued to do so ever since. To-day the child is a good specimen of a healthy, robust boy. The treatment was continued for about one year.

Case II.—Carrie K——, aged five months, weight eight pounds. Unfortunately this child was not weighed at birth, and therefore I am unable to state that fact. The parents of the child declare that she has grown slightly in length, but that she has not gained the least in plumpness.

When first seen the case presented about the same symptoms as Case I., viz.: restlessness, some vomiting, constipation, and lack of development. The child was entirely free from any constitutional taint, was bright and intelligent, nor could I discover any evidences of constitutional disease in either father or mother.

The diagnosis was the same as in Case I., and the treatment has been the same.

I regret that I am unable to give the final results in this case, as the child has only been under observation about four weeks. The constipation is already relieved, and the child shows a marked change in appearance, the cheeks are beginning to fill out, and I am confident the results will be as satisfactory as in Case I.

It might also be well to state that this child also had been the recipient of innumerable cathartics at the hands of physicians.

Now, what is the condition which we have presented in these two cases? Simply, feeble children of slow development. If development may be arrested from any cause in the *fœtus in utero*, why not in the infant *ex utero?*

A child grows most rapidly during the first few weeks of its life, and at the end of its first year should weigh about twenty pounds, and gain about four pounds a year for the next few years, and at the end of the first year should be about six or seven inches in height, and gain about two inches each year thereafter. This is the normal standard, according to Vogel.

But here are two children, one, at the end of fourteen months, weighing nine pounds, and the other, at the end of five months, eight pounds. Surely there is a decided lack of development. What is the etiology of this affection?

Undoubtedly, the most frequent cause is deteriorated milk. Improper food and premature weaning we would also suggest. Human milk, according to analysis, contains:

Water	889.08
Solid matters	110.92

These solids are composed of—

Sugar	43.64
Casein and extraction matters	39.24
Butter	26.66
Incombustible salts	1.38

When the milk contains these ingredients in the proper proportion, if it is assimilated by the infant, we have natural growth and successive development; *per contra*, if there is a lack of any of these elements, we have imperfect nutrition as a result.

This food has to exert a two-fold influence in the human organism: first, it has to furnish material for the growth of the body, and second, matter for the maintenance of its temperature. And life cannot long be properly supported except on a diet where the elements of nutrition and the elements of respiration bear a proper proportion to each other. As has been remarked before, if there is an absence of any of the important ingredients of the milk we have imperfect nutrition.

And surely if there is a defective supply of the oleaginous matter which contributes to supply the fat of the body, it becomes at once apparent that we have the condition which we have endeavored to lay before you in this paper.

The result of this defective supply of nourishment is, as we have already seen, that the infant does not increase in size, and the excreting functions of the body are not properly carried on.

[1] Read before the Yonkers Medical Association, January, 1882.

The physiological explanation of this is, that the infant is compelled to force from its own tissues to supply the nitrogenous elements essential to the maintenance of life, unless we fortunately see the case in time to do so artificially by the therapeutic use of oleum morrhuæ as we have suggested.

So much for the etiology, and now as to the pathology.

When we come to examine a body dead from inanition, we find, according to the best authority, a complete absorption of fat, and the removal sometimes of some of the cellular tissues. The liver is congested, the gall-bladder full of bile, and the stomach and small intestines are empty, also pale; Peyer's glands more prominent than natural, and there is remarkable development of the solitary glands of the large intestines, the dark orifice of which render them very evident. In short, there is a general appearance of inflammation of the whole secreting apparatus of the intestinal canal.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA.

SERVICE OF WILLIAM GOODELL, M.D.,

PROFESSOR OF CLINICAL GYNECOLOGY.

(Reported by Guy Hinsdale, M.D.)

UTERO-VAGINAL PROLAPSE — CYSTOCELE, RECTOCELE, AND LACERATIONS OF CERVIX AND PERINEUM.

TWELVE years ago, during a hard labor, this woman sustained a laceration of the cervix and of the perineum. After delivery, the physician in attendance performed the ordinary operation for rupture of the perineum, but the wound failed to unite. Ever since that time the uterus has remained heavier than it should be, and the vagina—the hollow column which relies for its sustaining power upon the integrity of its perineal abutment—has been gradually sinking until, in fact, it has become completely everted, just as the finger of a glove may be turned inside out. The womb has descended bodily, and is wholly exposed to view. Not only this, but the bladder and rectum have shared the same fate. The former has been dragged to a great extent outside the body, and the rectum in its descent has carried with it Douglas' pouch and a coil of the intestines.

Let me prove to you that all these conditions are present. You notice that the tumor is pyriform, that it can be circumscribed by the finger, and that the sound passes to a depth of two and a half inches, its tip being felt in the mass outside the body. I now introduce the sound into the bladder, and you observe how readily its lower margin can be defined. Next, I pass my finger into the rectum, and, with my thumb, push up the posterior wall of the inverted vagina. This double touch proves that a pouch of the anterior wall of the rectum is among the constituents of the protruding mass. Douglas' pouch and a few coils of intestine also participate.

The displacement of the bladder renders the woman unable to pass her water in a stream; the detrusor muscles of the abdomen can no longer compress it, and the dribbling of urine and the friction of clothes have produced ulcers on the vagina and cervix. We have, therefore, in the single case before us, a laceration of the cervix and of the perineum; inversion of the vagina, with ulcers; prolapse of the womb; a cystocele and rectocele; and hernia of the intestines.

This is a condition of things which, fortunately, is rare. You might suppose that this unlucky woman had been neglected during childbirth, and was without medical attendance. On the contrary, you will find that many of these cases have been treated in accordance with the most modern obstetrical practice. In the first place, she suffered a laceration of the cervix. Why should that accident happen so often? How shall we account for the fact that, of the women that come to the gynecological dispensary of this hospital, one out of every six has an ununited laceration of the cervix? In these busy days there is an unfortunate tendency to urge on labor. To attain this end it is a very popular thing to rupture the membranes early, to give ergot, and, perhaps, before the os uteri has become dilatable, to resort to the obstetric forceps. Indeed, so common is it to break the bag of waters early in labor, that a member of the British Medical Association made the unchallenged statement "that at one time he thought the membranes were of some use, but he did not now believe it." Such haste and such contempt of Nature's methods ought never to be sanctioned.

But how came the perineum to be torn? Perhaps the child's head was large, or presented in an abnormal position; or it may be that the forceps again were responsible, or that the perineum was not properly guarded. But we must not accuse the attendant of incompetence, because sometimes, in spite of the greatest care, such an accident will happen. If you wish to save the perineum, my advice is not to touch it. In other words, I believe that continuous, firm pressure upon the perineum, with a napkin or without one, with "thumbs up" or "thumbs down," works more evil than good. The perineum becomes hot, bruised, congested, and benumbed; its vitality is impaired, and in the last throes of labor is apt to give way. The support that is needed ought not to be applied to the perineum, but directly to the head itself. When the perineum becomes rigid you may relax it by passing two fingers into the rectum and hooking the sphincter ani; then pulling it forward, with the thumb of the same hand you make the needful restraining pressure upon the head. In this way you not only strengthen the line of greatest perineal tension, and restrain the too rapid advance of the head, but at the same time the circulation of the blood remains free. The nerves are not benumbed by a double pressure, and the perineum remains a living, elastic, and sentient tissue.

As for the forceps, they would work less mischief were they not used so often in the dark, or permitted to retain their hold upon the head until delivery is accomplished. The safest rule to follow is, in most cases, and always with primiparæ, to take off the forceps as soon as the perineum begins to bulge, and to leave the final delivery of the head to the expulsive efforts of the patient.

We shall not, in this case, attempt to do more than one operation at a time, although I have repeatedly done them both together. We shall direct our attention, first, to the cervix. It will be necessary to denude carefully the opposing surfaces of the laceration, and then, by silver stitches, to bring the raw edges of the wound into accurate coaptation.

The after treatment will consist in keeping the patient in bed for two weeks, and in giving opium

to quiet her bowels for six days. It will also be necessary to catheterize her for the first forty-eight hours, and, after the third day, to wash the vagina twice daily with a weak carbolized solution. On the seventh day a laxative will be given, and a day or two later the stitches may be removed.

After the cervix is restored, we can operate upon the cystocele. Our plan will be to denude an oval-shaped surface of the mucous membrane upon the anterior wall of the vagina, and bring the edges together to make a linear cicatrix, which will act like a narrow splint, to stiffen and support this anterior wall. This I shall further support by the restoration of the perineum. In this way, by three different operations, we may hope to cure our patient.

BRITISH LYING-IN HOSPITAL, LONDON.

UNDER THE CARE OF DR. FANCOURT BARNES.

CASE OF PUERPERAL SEPTICÆMIA DEPENDENT ON RETENTION OF PART OF PLACENTA—CARBOLIZED INJECTIONS—RECOVERY.

MARY ANN S——, aged thirty-three, was admitted on March 27, 1882, having been in labor about six hours with her fifth child. The presentation was normal, and the child (female) was born in about twelve hours from the commencement of labor. The placenta was adherent and had to be removed. There was considerable post partum hemorrhage—so much so as to blanch the lips and gums of the patient. The patient was slightly delirious afterward. The pulse was 80, and the temperature rose to 100.5° F.

The next day (28th) the temperature fell to normal; pulse, 84.

March 29th. — Temperature, morning, 99.2°; evening, 104°.

March 30th. — Temperature, morning, 101.5°; evening, 104°. Bowels opened freely by an enema.

March 31st. — Temperature, morning, 101.2°; evening, 104.5°; pulse, 96. Two and a half grains of calomel were given and afterward seven grains of quinine and one-fourth of a grain of extract of opium.

April 1st.—Temperature: morning, 104.8°; at 3 P.M., 104°; at 5 P.M., 105°; and at 9 30 P M., 103.2°. The pulse rose during the day from 120 to 144. A draught containing twenty grains of chloral and the same amount of bromide was given in the evening.

April 2d.—The morning temperature was 104°, rising to 104.8° at 2 P.M At 4 P.M. the uterus was syringed out by Dr. Barnes with carbolic solution (1 in 60), which brought away a few clots without pain. A mixture containing six grains of sulphate of quinine and twenty minims of tincture of opium was ordered to be given every four hours. The temperature rose to 105° at 5 P.M., and reached 105.2° at 8 P.M. Pulse, 136.

April 4th.—Temperature, morning, 99.8°; evening, 105.2°. Pulse, 120 to 140. The uterus was again syringed out with carbolic lotion. The temperature rose to 103° in the afternoon of the 6th, but afterward fell gradually, and on the 7th was normal.

Four grains of quinine with a quarter of a grain of extract of opium were given every four hours.

The temperature continued to vary from 98° to 99° (rising to 100° only once, on the evening of the 9th) till the 11th instant, from which date it remained at normal, and the medicine was discontinued.

The patient improved rapidly from this date, and was discharged on the 22d.

Progress of Medical Science.

CYST OF FIBULA—EXCISION.—J. W. Buchanan operated upon a lad twelve years old, for a large oval tumor on the outer side of right leg, extending from fibular articulation downward for about six inches, and measuring from its inner side to the middle of the leg behind, over its most prominent part, eight inches. On the inner side a slight furrow separated it from the tibia, but behind it could not be distinctly defined. It was immovably fixed, smooth, uniform in outline, hard on palpation, with here and there a spot which gave a semi-elastic sensation, with egg-shell crackle on firm pressure. The skin was freely movable over it. There was no pain nor tenderness to pressure, nor was walking interfered with. He stated that falling from a tree a year before, he had bruised his right leg below the knee. Hot fomentations had caused speedy relief of all painful symptoms, but there had remained a slight thickening of the tissues. A second injury upon the same part had been similarly treated, and had resulted in a similar manner, except that the thickening had been more marked. After a time this swelling gradually increased, then more rapidly, and more lately had remained stationary. As the indications seemed to be that the growth was malignant in nature, amputation was determined upon, and the patient was chloroformed for that purpose. However, upon cutting down upon the tumor, it was found to be a cyst, and Dr. Buchanan simply excised the upper half of the fibula. The patient recovered entirely.—*Glasgow Med. Jour.*, May, 1882.

CASE OF EXPULSION OF A PORTION OF SMALL INTESTINE FOLLOWING REDUCTION OF STRANGULATED HERNIA—RECOVERY.—The above case is reported by Dr. E. Gilly, of Fons-Gard, in the *Courrier Médicale* for June 10, 1882. The patient was a farmer, aged thirty-seven, who, during six years, had been the subject of a right inguinal hernia, which was but little larger than a hen's egg, perfectly reducible, and habitually kept in position by a truss. On May 3d, during a short railway ride, the patient, who latterly had neglected to wear his truss, observed a considerable increase in the size of the inguinal tumor. After quitting the train he walked slowly to his house, a distance of rather more than a mile, supporting the tumor with his hand. On the same day Dr. Gilly was called and found the patient in bed, suffering violent abdominal pains, greatly agitated, and vomiting everything taken into the stomach. The scrotum was of a stony hardness and was distended by a tumor as large as a man's fist, and pyriform in shape. Diagnosis of strangulated hernia. Two attempts at reduction by taxis with the use of moderate force proved unsuccessful. Dorsal decubitus ordered, with head and thighs elevated; application of a bladder filled with cold water; administration of an infusion of nux vomica. May 4th.—No change in hernial tumor. Infusion not well borne. Another unsuccessful attempt at taxis. Bilious vomiting, the vomita having

a fecal odor; almost constant hiccough. Dr. Portal, of Saint Geniès, was called in consultation, and by employing considerable force, grasping the tumor with his large hand, the latter succeeded in effecting complete reduction. Spica bandage ordered. Beef-tea diet. Enema of oil, etc., ordered. At the evening visit Dr. Gilly found the patient very feeble. The enema had been immediately returned, the patient having also a sensation as of an obstacle in the rectum completely blocking its passage. Slight vomiting. May 5th.—Reappearance of hernial tumor; easy reduction. May 6th.—Vomiting had quite ceased. Occasional stools. May 7th.—Patient, disobeying orders, had risen from his bed. Return of vomiting and of hernial tumor. Reduction again. May 9th.—Patient had removed a new truss applied the day before. Vomiting again with great prostration and agitation, and with slight tympanites and some tenderness of abdomen. May 10th.—No further vomiting; slight general improvement and less tympanites. May 11th.—Patient had again risen from bed and had also removed the truss. Vomiting worse than ever. Hernia reduced again, but this time with some difficulty. Ever since May 5th, citrate of magnesia in small and frequently repeated doses had been used to check vomiting and to keep the bowels open. May 12th.—Cessation of vomiting and marked improvement. May 13th.—Convalescence established; no tympanites; stools are formed; hernial tumor well supported by truss. On May 29th, Dr. Portal, while making a round of visits at Gayen, was called to examine a "piece of flesh," which the patient was stated to have passed by the rectum. This was found to be a portion of the small intestine, and Dr. Portal at once brought it for Dr. Gilly's inspection. The piece of gut was twenty-eight centimetres in length, it was ragged at both ends and exhaled an odor of putrefaction. but was found to be quite impervious to water. There was attached to it no fragment of epiploon. From the patient himself Dr. Gilly learned that for eight days preceding the discharge of this fragment of intestine he had suffered from diarrhœa not severe enough to confine him to bed or to the house, yet resisting all domestic treatment. The patient's health at the date of the doctor's report was excellent; bowels regular, appetite good, and all emaciation had disappeared.

Parasitic Nature of Cerebro-Spinal Meningitis and the Infectious Nature of the Accompanying Nephritis.—M. Ernest Gandier has recently published the history of a case of cerebro-spinal meningitis, in which he claims to have demonstrated for the first time the parasitic nature of the disease. The case was that of a woman, aged thirty, seen at the Hôpital Cochin, who was seized suddenly after a suspension of the menstrual flow, with violent headache and pain in the back, accompanied by chill, high fever (temperature, 104°–105.4° F.), and marked typhoid symptoms. Typhoid fever was at first suspected, but the rapid supervention of strabismus. dilatation of pupils, stiffness of neck, and fixed rotation of head to the right. with general hyperæsthesia, delirium, and coma, soon established the diagnosis of meningitis.

Chemical examination of the urine revealed the presence of albumen of two kinds, the *retractile albumen* of Prof. Bouchard (attributed to renal lesions), and the *non-retractile* (considered as an indication of some general infection of the system involving the kidneys). Microscopical examination of the urine and blood undertaken during life and with antiseptic precautions, showed the presence of moving micrococci in great numbers, of various sizes, generally isolated, but in some cases united in pairs.

The death of the patient occurred on the sixth day, from coma. The latter was accompanied by profuse sweatings and retention of urine. At the autopsy, the intestinal follicles were enlarged and prominent, spleen enlarged and softened, liver much enlarged and in a condition of fatty degeneration, lungs congested, heart flabby and "dead-leaf colored," blood black, fluid, and without clots. The kidneys presented the lesions of infectious nephritis as first described by M. Ch. Bouchard in typhoid fever and as observed by the author in diphtheria. Both the cortical and the medullary portions were congested, the former marked by whitish striæ. The microscope showed considerable swelling and granular degeneration of the renal epithelial cells with effusion of granular matter into the lumen of the tubules. The meshes of the cerebral and spinal pia mater showed the usual purulent effusion. This exudation contained numerous micrococci, like those discovered during life in the blood and urine.

M. Gandier ventures to draw from this case the conclusion that the presence of micrococci in the blood and urine tends to prove the parasitic nature of cerebro-spinal meningitis. He attempts to explain in this way both the contagious nature of the malady and its occurrence in epidemic form. At the same time an explanation of the general typhoid symptoms accompanying the meningitic manifestations would be found. The existence of a new variety of infectious nephritis, analogous to that already described by Prof. Bouchard, is also pointed out. The meningitis and the nephritis are to be considered as secondary to a primary parasitic infection of the system.—*Revue Médicale*, June 3, 1882.

Cerebral Irritation in Children.—The *Annales et Bulletin de la Société de Médecine de Gand* for May, 1882, quotes from the *Practicien* an article by Dr. J. Simon bearing the above title. Dr. Simon lays stress upon the fact that this form of cerebral irritation differs very markedly from the affection as seen in adults. He defines it as a slowly progressing neuropathic condition, unaccompanied by any organic lesion, beginning in early infancy, and throughout its course entirely free from any accompanying febrile action. It is not incurable, but, unless subjected, almost from the start, to a treatment both careful and systematic, and, above all, persistent, it will lead inevitably either to sclerosis of the brain or to epilepsy, meningitis, etc.

The child affected with cerebral irritation is one in whom nervous reaction is exaggerated, and in whom over-active cerebral circulation gives rise to a condition of irregularly disseminated congestion. Such a child is commonly the offspring of parents having the nervous diathesis, the subjects, perhaps, of some distinct neurosis, and not infrequently the victims of chronic alcoholism. Syphilis in the parents is another predisposing cause. As immediate exciting causes, we have exposure of the child to the excitements of society life, especially as it exists in large cities, and also the use of tea, coffee, or wine.

Beginning even in the infant at the breast, cerebral irritation may persist up to the fifth or sixth year of life. At this age it either disappears or undergoes a modification of its character, as it now shows it-

self under the form of epilepsy, sclerosis, meningitis, etc. The symptoms of cerebral irritation in the child do not lead the parents to suspect either existing or threatened disease. By them the child is merely regarded as wilful, capricious, nervous, excitable, restless, etc. He is subject to night terrors, to sleeplessness, is easily agitated by day, and shows fickleness in his moods, while a general lack of harmony is observable in his actions. The cutaneous sensibility is disordered. To a careless observer many of the symptoms would seem to point to the approaching onset of some acute inflammatory disorder, such as pneumonia, scarlatina, or typhoid fever, but there is never any rise of temperature, neither is there any delirium. Again, there are no persisting epileptiform phenomena, no paralytic attacks, no motor disturbances, such as succeed the congestive attacks of cerebritis or cerebral sclerosis. This condition is, as before stated, a frequent sequela to the purely irritative morbid condition mentioned, and, unlike the latter, is accompanied by organic lesions.

The prognosis of cerebral irritation in children is necessarily serious. Nevertheless, not fatal, as serious consequences may be averted by rigorous and persistent treatment. For the success of such treatment the physician must have entire control of the case. While constantly on his guard against the ever threatening termination of the condition in cerebral sclerosis, the physician must be prepared for the occurrence of eclamptic seizures. They are, indeed, very easily provoked, and, if frequently repeated, predispose in their turn to cerebral congestions. A complete cure, however, is not to be despaired of, even though, as the result of such attacks, the patient be brought, as it were, upon the very verge of sclerosis. Symptoms due to attacks of cerebral congestion will sometimes be more marked upon one side of the body than upon the other. This may be true of a sense of formication, or, perhaps, we may find a slight degree of weakness in a single limb, or it may be in the upper and lower limbs of the same side. All such phenomena being in pure cerebral irritation of children extremely transitory in their nature.

In most cases, cerebral irritation quite disappears after a certain age. Nevertheless, occasionally it appears to lie dormant and ready to break out in severer cerebral symptoms on the advent of some intercurrent malady.

Treatment should be both hygienic and by drugs. As a main factor of the hygienic treatment, the child must be carefully guarded against excitement of all kinds. Among drugs, Dr. Simon has found bromide of potassium by far the most efficacious. He gives it in steadily increasing doses until a slight degree of prostration is produced. To a child of two years he administers as much as a gramme per diem at the start, dividing it into three doses, and invariably directing that it be taken before meals. This quantity he increases to a gramme and a half, and then to two grammes per diem, and continues giving the latter amount for four or five days. The dose is then progressively diminished. In no case, however, should the drug be completely suspended for any length of time. Treatment must be kept up until every nervous symptom has disappeared.

Besides potassium bromide, Dr. Simon employs mild derivatives, preferring the application of dry cups along the upper portion of the spinal column, and at points on a level with the mastoid processes, rather than the use of vesicants. Tepid baths he also recommends, as well as certain medicated baths, *i.e.*, *bains de tilleul, bains de valériane*. The use of electricity or of the douche he strongly condemns, and he considers sea-air objectionable. Constipation is, of course, to be avoided, as tending to induce cerebral congestion, and the digestive organs must receive careful attention.

GOITRE, CRETINISM, AND IDIOCY.—Dr. Hermann contributes a memoir on this subject (Friedreich's *Blät. für Gerichtl. Med.*, 1882, p. 128), and arrives at the following conclusions: 1. Although poor living, badly ventilated dwellings, improper clothing, etc., may influence the development of these diseases, they cannot actually produce them. 2. There is no connection between the number of marriages between blood-relations, and the number of instances of cretinism. Marriages between blood-relations appear rather to diminish than to increase the tendency already present of producing cretinism. On the other hand, idiocy may be, and appears to be, produced by such marriages; *e.g.*, Howe records seventeen cases of marriages between blood-relations, producing 95 children, of whom 45 were idiots, 12 scrofulous, 1 deaf, and 1 dwarfed. 3. Cretinism is never uniformly manifested in one locality, but is developed at varying times in certain streets, or houses, and that it becomes active at the time when the human organism is not yet fully developed. 4. The hereditary character of the malady is in certain cases undoubted. 5. In the case of cretinism in the children of healthy parents, there must be a direct specific alteration of the germs by the deleterious matter, without any change occurring in the parents themselves. They are, so to speak, the vehicle for the peccant material. On the other hand, it appears that, when the disease has once appeared in a family, a specific tendency thereto can be traced in the descendants. Even if this tendency have been latent for a time, it often reappears in consequence of some either normal physiological cause, or some newly developed pathological irritation.

ERGOT IN PERTUSSIS.—Dr. John Dewar, in the *Practitioner*, May, 1882, draws attention to the great value of the liquid extract of ergot in whooping-cough, in which disease he believes it to be the best and safest of all remedies. In the *Edinburgh Med. Jour.*, 1863, Dr. Griefenkel reported a case of a lad, six years old, who was cured of whooping-cough in eight days by the use of ergot.

AMYL NITRITE FOR AGUE.—Dr. Saunders, of Indore, India, reports in the *Indian Medical Gazette*, a number of cases of ague successfully treated with amyl nitrite. He asserts that in every instance the disease yielded quickly and permanently to the amyl treatment. He mixes the drug with an equal volume of oil of coriander, to make it less volatile and to cover its odor, and administers it as follows: Four drops of the mixture are poured on a small piece of lint, which is given into the hands of the patient for him to inhale freely; he soon becomes flushed and both his pulse and respiration are much accelerated, and when he feels warm all over, the inhalation is discontinued, as the symptoms continue to increase for some time afterward; a profuse perspiration now sets in, which speedily ends the attack, though in some cases the cold stage merely passes off without any hot or sweating stage.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, September 16, 1882.

A DRUG-TAKING NATION.

In a series of articles in the *Medical Press and Circular*, Mr. Frederick Newcome gives an account of the Chinese materia medica, and makes a number of striking statements regarding the drug-taking capacity of the descendants of the Sun.

The Chinese are, he says, pre-eminently a medicine-making and medicine-taking people. At Hankow alone, one of China's nineteen open ports, over twenty million pounds of drugs pass annually through the foreign customs, besides a nearly equal amount of other substances used in drug manufacture. At most of the other ports medicines in the form of dried bulbs, roots, leaves, bark, and stalk, stand fifth or thereabouts on the list of imports and exports. At the port of Ningpo the trade in drugs of all kinds represents from one-third to one-half of the total commerce of this place. To all this must be added the immense quantity interchanged overland and conveyed in native-owned junks. There is hardly a herb in the Flowery Kingdom to which some medicinal property is not attributed.

The raising of medicinal plants, and manufacture of medicines therefrom, has thus become a separate and extensive industry, so much so as to make China the eighth wonder of the world in this respect. Moreover, this industry is yearly increasing.

Curiously enough, the Chinaman, although addicted to drugs, is, so to speak, a Thompsonian, and uses vegetable remedies almost exclusively. Mineral compounds are only employed externally, as a rule, and even mercury in syphilis is neglected, the opinion being that it will cause impotence or barrenness.

Another peculiarity of the Chinese materia medica is that, although so extensive, it apparently is quite different from ours. The Chinese do not even use, to any extent, such drugs as rhubarb, aloes, castor-oil, or ordinary camphor, although they raise and export them in large quantities. Concerning rhubarb, the Chinaman, while not employing it much himself, is profoundly convinced that it is an essential to European civilization, a bulwark indeed of the Christian social fabric. During the war of 1839–1840, the policy was seriously discussed of cutting off the exports of rhubarb, it being believed that the Europeans would then soon die of constipation.

Mr. Newcome enumerates somewhat over a dozen drugs which are particularly popular with the Chinese, and mentions many others widely used but whose properties are little known to Europeans.

Ginseng, naturally, heads the list. Despite European and American criticism it still holds its place in the affections of the celestial. Furthermore, the price of some varieties is enormously high, as much as five dollars an ounce being paid for the wild Manchurian variety. Millions of pounds sterling are spent yearly in its growth and purchase.

Mr. Newcome thinks that foreigners have not given it a fair trial; that the specimens raised in America or brought here and to Europe have been poor. This view takes some plausibility from the fact that there is a great difference in the quality of the plant in China itself. The popularity of the drug is certainly immense, and it may almost be said to form part of the daily diet of every well-to-do inhabitant.

Tangkuei is the name of a drug made from the roots of the *Aralia Edulis*, a shrub quite common in China. The annual consumption of it amounts to several million pounds a year. The annual exports at Hankow in 1880 were valued at $250,000. It is used in debility and in uterine disorders, but it seems to be nothing more than a cheap tonic.

Paichu is the forked roots of a species of distaff thistle. It is estimated that two million pounds of it are raised annually. It has, like most of the drugs described by Mr. Newcome, reputed tonic and stimulant effects.

Yüangshên, of which over a thousand tons are raised every year, is given to women after confinement as a stimulant to the mammary gland. It is also a tonic, but is used, in addition, in fevers, and in heart, lung, and kidney diseases. It is a kind of cheap substitute for the great panacea, ginseng.

Maitung is the tuber of a liliaceous plant, *Ophiopogon Japanicus*, and has reputed properties as a tonic and refrigerant. It is given as a remedy for vomiting, blood-spitting, dry cough, and lung diseases generally. In large doses it is narcotic.

Peium is the decoction of an herb, *Liliacea revularia*, which is highly esteemed as a safe cure for fevers, dysentery, internal hemorrhages, gravel, and bladder diseases. It is also used as a liniment.

Shengti, the roots of *Repinannia Chinensis*, is used by the physicians of Canton as a blood purifier and alterative.

Yuanho is also a blood-purifier and alterative, but in addition has astringent and sedative properties. It is thought to be of especial value in female disorders.

Yujon is a drug in much repute for worms, fevers, and especially as a stimulant to the sexual organs.

The above are examples of some of the more popular Chinese drugs. It would hardly be worth while to prolong the list thus given. The actual knowledge of their medicinal value, nevertheless, is slight. Almost every one seems to be either a tonic or a panacea.

There is plainly a fruitful field for medical study in China if the field can only be reached. The opportunity is particularly good for those who believe in empirical therapeutics. But the nihilist may also, if he chooses, draw from Mr. Newcome's statements some pleasing reflections, and for the latter's comfort, the fact may be mentioned that the Chinese, in common with the inhabitants of India, do not take to European medicines very enthusiastically, although they admit the superiority of our surgery. Are our drugs poor, or are theirs better, or are both equally bad?

At any rate, the Chinaman seems to be a drug-taking animal. We opine that he is driven to this habit by the fact, quite well attested, that he is under-clothed, under-fed, over-crowded, and altogether a sickly creature. And man seeks the apothecary, not because drugs are so potent, but because he feels so miserable.

THE HYPNOTIC VALUE OF CANNABIN TANNICUM.

Trousseau, in his "Treatise on Therapeutics," predicted such a future for hashish. Now, Dr. Fronmüller, of Fürth, asserts, in *Memorabilien*, July 21, 1882, that such a future is assured. Through the help of the chemist, Merck of Darmstadt, he has obtained a preparation of hemp, the tannate of cannabin, which he finds reliable, effective, and easy to administer. His description of the drug and of his clinical experiments with it are of interest.

The tannate of cannabin is a yellowish brown powder, insoluble in water or ether, slightly soluble in alcohol, and easily dissolved in water that has been made slightly alkaline. It has a taste like tannin, and a not unpleasant smell. In the distillation of hemp, two volatile oils are developed, cannabin oil and its hydrate. These are rapidly acting, irritant poisons. They are said to be removed in the preparation of the tannate.

In describing the dosage and practical use of the cannabin, Dr. Fronmüller states that he has used hemp itself considerably for thirty years, and that there has been a steady increase in the strength of the preparations furnished him.

Thus, thirty years ago, he began with a dose of eight grains, ten years later he had to reduce it to four, and latterly to two grains. The dose of the present preparation, the tannate, ranges between gr. ii. and gr. x., the most frequent dose being gr. v.

The drug was used fifty-seven times in hospital and six times in private practice. The patients consisted of twenty-one men and forty-two women, varying in age for the most part between twenty and forty years. Forty of them were suffering from phthisis, the remainder had different diseases, generally of a chronic nature.

The common symptom in all cases was insomnia, and it was for its hypnotic effect that the cannabin was given. Good results were obtained in thirty-seven cases out of the sixty-three, and moderately good results in fifteen cases. It was called a good result when quiet and uninterrupted sleep came on within an hour after taking the medicine, the patient awakening with no toxic after-effects. In twelve cases no result was produced. Many of the patients had been taking opium.

From the sixty-three trials thus reported, Dr. Fronmüller concludes that *cannabin tannicum* is a very useful hypnotic, powerful without being dangerous, and one which does not disturb the secretions or leave unpleasant toxic after-effects, if given in proper dose.

It is very probable that some of our American fluid extracts, now in the market, will secure about the same results as those obtained by Merck's preparation.

THE MORTALITY AFTER AMPUTATIONS IN CITY AND COTTAGE HOSPITALS.

In connection with the subject of cottage hospitals, which we discussed a short time ago, we call attention to certain facts reported in the *Medical Press and Circular* by Mr. Henry C. Burnett. This gentleman has undertaken to settle the long-mooted question whether the mortality after amputations in cottage hospitals is not less than that in large metropolitan hospitals. Some fifteen years ago Sir James Simpson wrote upon this subject and tried to prove that there was an excessive mortality in the large metropolitan hospitals, due to a condition which he described as "hospitalism." Simpson's views and statistics have been very vigorously criticised. Mr. Burnett's statistics, however, tend to sustain them. This gentleman sent circulars to one hundred and sixty cottage hospitals and obtained available replies from sixty-one. The cases of amputation thus collected numbered three hundred and twenty-six, and the mortality among them amounted to a little over seventeen per cent. On the other hand, the mortality from amputations in four large London hospitals, containing over one thousand eight hundred beds, was estimated by Erichsen to have been 37.8 per cent. The mortality in Parisian hospitals,

as given by Malgagne and Hussen, Holmes and Bristowe, amounts to sixty per cent. The mortality at Zurich between 1860 and 1867 was given by Bilt as forty-six per cent.

The lowest mortality rate after amputation in any of the hospitals referred to by Sir James Simpson was 34.4 per cent., while the highest rate was 47.3 per cent. Of the deaths which occurred in the cottage hospitals nearly one-half were from shock while five were from pyæmia.

Mr. Burnett's conclusion is that amputations done in cottage hospitals in the country are on the whole more likely to be followed by favorable results than those performed in the city. And he states that the country population is beginning to find this out, and to prefer the local hospital to the discomforts of a journey to the city, provided a choice can be made.

Our writer has collected his facts with great care and fulness, so that they deserve careful attention from those who would disagree with him. The most obvious criticism to be made, however, is that he has been dealing with the statistics of ten, twenty, and thirty years ago. Within a decade there have been changes in the surgical management of city hospitals and of wounds, little less than epochal. Comparative statistics are of slight value, therefore, if they go back more than five or ten years. It is a belief entertained very widely by metropolitan surgeons that a ward in a city hospital can be made as safe for most operations as if it were in the country. The history, for example, of what the late Dr. James R. Wood accomplished at Bellevue Hospital justifies such a view.

Taking the past fifty years, Mr. Burnett proves his point, but whether the mortality after amputations is now greater in large than small hospitals is quite another question, which remains open.

Schuylkill Water.—The Sanitary Committee of the Board of Health recently presented to the main body a report on the impurities in the Schuylkill River, which occasioned some alarm a short time ago. Examinations and analyses trace the trouble to an unusual chemical condition of the river water. The water was of a singular blue color, with an appearance of soap-suds, and the surface was covered with dead fish. This condition was caused by a superabundance of sulphuric acid from the coal mines of Schuylkill County. This is poured into the river at all times, but is usually neutralized by lime-water from the Maiden and Tulpehocken Creeks near Reading, the union of the streams forming sulphate of lime, which is precipitated upon the bottom. The precipitated sulphate of lime carried down with it to the bend of the stream the organic matter floating in the water, and as the fish sought this for food the sulphate stuck to their gills, producing mechanically death by suffocation.

Persian Insect Powder is made from pyrethrum flowers, and is said to be almost uniformly adulterated.

Reviews and Notices of Books.

La Sabbat des Sorciers. Par Bourneville et E. Teinturier. Bibliothèque Diabolique, pp. 45, illust. 25. Paris: Aux Bureaux du Progrès Médicale. 1882.

This is a curious work upon witchcraft. It describes the old ideas regarding this delusion. Many quaint and some questionable illustrations are inserted, all taken apparently from old works and executed in Middle Age style.

Transactions of the Medical Society of the State of Pennsylvania at its Thirty second Annual Session, held at Lancaster, May, 1881. Vol. XIII., Part 2. 8vo, pp. 893.

The State Society of Pennsylvania generally does very good work. The meeting of last year, the details of which are published in the volume before us, is no exception to the rule. The addresses are short, and, in the main, have much practical merit. The number of papers contributed is quite large. Those having a particular value are as follows: "Local Treatment of Inflammation of Cervix Uteri in Pregnancy," by Jacob Price, M.D., Westchester; "Extirpation of Ovaries for Insanity," by William Goodell, M.D., Philadelphia; "Diseases of the Ear in Locomotive Engineers," by Laurence Turnbull, M.D., Philadelphia; "Fractures in Close Proximity to Knee-joint, and Deformities from Fracture near the Elbow-joint," by Oscar H. Allis, M.D., Philadelphia.

Manual of Diseases of the Skin; with an Analysis of Eight Thousand Consecutive Cases and a Formulary. By L. Duncan Bulkley, A.M., M.D. New York: G. P. Putnam's Sons. 1882.

The little book before us embraces a concise account of the principal cutaneous affections met with in this country. The descriptions are well written and accurate. The principles of treatment advocated by the author are sound, and the work, as a whole, is superior to the foreign contributions of the same class that have of late appeared in the market. It is well worth its purchase-money.

A Curious Mode of Committing Suicide.—An inquest was held in the end of May upon a woman who had been a patient in the Hospital for Women, in Cork. She had been under treatment for endocervicitis for a month, and was about to be discharged, but it appeared she did not wish to go home; and at 6.15 one morning, she was found dead with part of a stocking protruding from her mouth. She had been seen at 5 P.M., by another patient, to rise and close the shutter, and return to bed, after which she had heard her moaning—not an unusual circumstance in a hospital. Dr. Cummins deposed that the woman died of suffocation, and he produced a very long stocking which he said he had taken out with the greatest difficulty, as it was very firmly fixed in the throat. The case is interesting medico-legally, proving what some have doubted, that persons may commit suicide by stuffing things into their throats, and doing so without making any disturbance likely to attract attention.—*Cor. of N. E. Med. Monthly.*

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, June 2, 1882.

DR. GEORGE F. SHRADY, PRESIDENT, PRO TEM., IN THE CHAIR.

THE paper of the evening was by DR. JAMES B. HUNTER, and was entitled

UTERINE AND VAGINAL DISCHARGES.

[The paper is reported in full on page 309.]

The subject being open for discussion,

Dr. James B. Hunter, in response to a question by Dr. Ball, regarding

CURETTING THE CERVIX,

said that he had often found granulations extending from the uterine cavity into the neck. He had curetted them with advantage.

DR. S. BRAYTON BALL said that he had thought that Dr. Thomas recommended such treatment in obstinate leucorrhœa. He had tried it several times with only palliative effect.

DR. GIBNEY referred to some cases of

LEUCORRHŒA IN CHILDREN.

He had been accustomed to meet several cases every year of sero-purulent vaginal discharges in children of two to six years of age. He had found them invariably in children of a strumous diathesis. In a few cases the patients had seat-worms.

A recent case was that of a delicate girl, five years old, suffering with acute synovitis of the knee-joint. He found after a week or so that she had a discharge from the vagina and had been using some astringent wash. Dr. Gibney put her upon calcium sulphide, gr. $\frac{1}{10}$ q. 3 h. At the end of a week there was no improvement. He then ordered warm and slightly carbolized injections. At last accounts she was not better. He had prescribed iron and cod-liver oil also. A little later the mother brought a second and then a third child suffering in the same way. He could find no cause.

DR. F. P. KINNICUTT had seen a number of cases of leucorrhœa in children, particularly in the Children's Department of the New York Hospital. They had in several instances been of a very obstinate character. The leucorrhœa was associated not infrequently with a strumous diathesis, but occasionally careful investigation had only revealed the presence of a large amount of uric acid in the urine. He suggested that the leucorrhœa might be due to the extension of a urethral inflammation, excited by this salt, to the vaginal mucous membrane. That a urethritis might be produced in this way there was no doubt. Moreover, a vaginal catarrh was of not infrequent occurrence in gouty women. In the gouty diathesis it is well known that the mucous membranes throughout the body are prone to take on an inflammatory condition. In other words, there was present in the diathesis both an increased susceptibility of the mucous membranes and an irritant (uric acid) capable of acting locally. In the cases referred to by the speaker there was marked irritation of the external parts. Examination of the urine showed a very marked uric acid condition, occasionally almost amounting to "gravel." Dr. Kinnicutt cited several cases in illustration, in which the leucorrhœa was pronounced, but of short duration. In his experience the leucorrhœal discharge, associated with the strumous diathesis, frequently persisted for weeks and even months. He had felt some doubt as to the propriety of local treatment in such cases, if it could be avoided.

DR. GIBNEY said that in his cases there was no uric acid in the urine.

DR. SAMUEL SEXTON had noticed that when patients suffering with aural affections experienced an exacerbation of co-existing uterine disease the aural trouble was very often temporarily worse. There was, he believed, an important reflex connection in such cases which very often complicated treatment.

DR. JAMES B. HUNTER, in reply to a question regarding

THE TREATMENT

of these discharges in children, said that he had generally found constitutional treatment and bathing of the external genitals sufficient. As a last resort he would certainly recommend injections.

DR. BEVERLY ROBINSON was inclined to lay less weight upon the diathesis in the cases under discussion. Local treatment was generally much more effectual.

The speaker referred to the fact that vaginal injections were more often used in Europe, and especially in France, as a mere matter of cleanliness, and he thought there was less leucorrhœa there than among American women in consequence. In the treatment of a vaginitis he suggested the probable advantages of cold rather than warm injections. In regard to the effect of the uric acid diathesis in producing leucorrhœa, he felt rather skeptical. It might be a coincidence. Irritations result also where there are large amounts of phosphates in the urine.

DR. HUNTER said he did not feel at all sure that leucorrhœa was more frequent in American than in French women. He had not used cold water injections because he believed them injurious, and had, indeed, seen bad effects from them. He said that in chronic cases he knew of no differential point. In acute cases the thick, creamy character of the discharge in specific vaginitis often enables one to distinguish it.

DR. C. L. DANA referred to the possibility of curing leucorrhœa, even when quite chronic, by constitutional measures. He thought that in young, unmarried women especially, local examination and applications made by the physician should be deferred to the very last resort. This was not always done by any means.

DR. HUNTER, in response to an inquiry, said

HORSEBACK EXERCISE

in persons suffering from leucorrhœa, even slight, was not a good thing as a rule. He had had occasion often to forbid its use, and with the best results. Dr. Sims had said, aphoristically, that no woman ought to ride horseback.

DR. DANA thought it made a great difference whether the woman was a good rider or not. Women who ride well and rise in the stirrups, according to the mode now in fashion, are not jolted.

The discussion being closed,

DR. GEORGE F. SHRADY related the history of an

OPERATION FOR REMOVAL OF A LARGE NASAL PHARYNGEAL POLYPUS,

illustrating the same by photographs, and by a skull, to the base of which a model of the tumor was attached.

[The case is reported in full on page 311.]

The subject being open for discussion,

Dr. Robert F. Weir said that he could add little to what Dr. Shrady had said. He thought with him that the great danger in such cases was from hemorrhage. Yet this could in most cases be guarded against. In future he should divide the operation into two steps. He would expose the tumor, ligate vessels, and stop the hemorrhage. He would then, after waiting a few days, finish the operation.

In these cases the hemorrhage is mostly venous, and it can be lessened by occasionally elevating the head and letting the blood escape from the mouth, as is done in cases where semi-narcosis is produced, or the patient should be placed in a semi-erect posture.

Dr. Shrady stated that it was impossible to have divided his operation into two distinct stages. Having started, there was no way but to finish as quickly as possible. He remarked that his patient's head was raised as high as seemed possible without seriously interfering with the rapid progress of the operation. He believed, however, that the position alluded to, when it could be employed, was a serviceable one, in moderating venous hemorrhages of the head and neck.

Dr. Sexton, in commenting on Dr. Shrady's case, alluded to the effect of such tumors on the organ of hearing; it was difficult to understand why deafness had not been induced by the growth in this instance. He related a case reported by Dr. Charles H. Burnett of a patient with a malignant growth (round-celled sarcoma) in the naso-pharynx where aural symptoms had appeared early. He thought an examination in these cases would nearly always show that some deafness existed. Judging from the photograph presented, Dr. Shrady's patient must have been compelled to habitually breathe through the mouth, owing to the interference with the physiological functions of the pharyngeal muscles and the mechanical closure of the naso-pharyngeal passages, which must have greatly interfered with intra-tympanic air-renewal. In such cases the membrana tympani would very likely be found greatly retracted, and the tympanic cavity more or less filled with retained mucous secretions.

At the close of the discussion the Society elected the following officers for the ensuing year: *President*—Dr. James B. Hunter; *Secretary*—Dr. Charles L. Dana.

Cystitis Treated by Urethrotomy—Fatal Case of Litholopaxy.—In Vienna I have seen nothing of especial interest recently in the clinical way, except two unpublished cases of Prof. Dittel's. In a case of very old and very obstinate cystitis, which had resisted all the usual therapeutic measures, Dittel made external urethrotomy in the membranous portion, introduced a catheter *á demeure*, and washed out with boracic acid solution. Within two months the patient went home with healthy urethra and bladder.

In a litholopaxy, last week, Dittel introduced the No. 30 catheter for washing out the bladder. Five days later there was thrombosis of the dorsal vein of the penis, soon followed by chills, and by gangrene of the glans. Patient (man of sixty-four years) is expected to die in a few days of septicæmia. This is, I believe, the first "*malheur*" that Prof. Dittel has experienced in nearly a hundred lithotrities.—*W. T. Belfield in Chicago Medical Journal and Examiner.*

Correspondence.

THE TREATMENT OF PILES BY DILATATION AND HOT WATER.

To the Editor of The Medical Record.

Sir: I have just read Dr. J. L. Powell's paper, in the last number of The Record, on the treatment of hæmorrhoids by dilatation and hot water irrigation, which, while I entirely approve of his method and admire his reasoning upon it, forestalls a paper I have been preparing on the same subject. I perceive if one would be first to give a new idea, he has no time to wait for numerous illustrations, for nature, like a politician, has a sly way of whispering the same secret to half a dozen in the same day in as many parts of the world.

To come at once to the point, I advised on March 5th, a patient, Mrs. W. H——, who was decidedly anæmic from hemorrhage from the rectum, occurring daily in large quantity, whenever the bowels were moved, and who was averse to rectal examination, to distend the rectum with as much hot water as it would contain, immediately after each natural evacuation from the bowels. She succeeded in retaining eight ounces daily, and at the end of ten days there was no further appearance of hemorrhage, but by advice continued the use of the hot water two weeks longer, and reported herself completely cured of what had been at times a frightful complaint. On March 31st, her husband consulted me regarding internal hæmorrhoids accompanied with bleeding. Iodoform suppositories were ordered at bed-time, a laxative enema in the morning, followed after movement from the bowels by the injection of eight ounces of water, as hot as could be borne. This was continued for a fortnight with entire relief to the troublesome symptoms.

April 2d, I ordered laxative enema, followed after movement with hot water injection, in the case of a carpenter, Mr. W——, who was subject to constipation with slight prolapsus ani accompanied with bleeding whenever the bowels moved. Eight ounces of hot water were injected and retained, and at the end of a month he was greatly improved, the hemorrhage having ceased, but he neglected further treatment, and I am not able to state his present condition.

June 5th, I directed the same treatment for Miss B——, who was weak from loss of blood occurring in the same manner as in Case No. 2. She soon began to improve and the hemorrhages entirely ceased at the end of eight days, but the prescription was persisted in a few days longer, and no further bleeding has occurred.

July 17th, I prescribed the same treatment for Mr. A——, who met with daily loss of blood when the bowels were moved. His, like the others narrated, was a chronic case, but yielded like the others, and I am told there has been no bleeding since the 1st prox.

There was no irrigation employed in any of these cases, as in that detailed by Dr. Powell, nor was any of them so bad as his, but the principle is much the same. A half pint of hot water was retained by each of these patients when the rectum was unloaded of fecal accumulation, and began to act at once on the mucous surface, constringe the hemorrhoidal veins, and exert that far-reaching influence

on the pelvic circulation Dr. Emmet speaks of. This it continued to do for some minutes before cooling to the natural temperature of the body, and it can be said of it in all the cases given that it answered the purpose intended; but for continued irrigation in graver diseases Dr. Powell's method presents greater advantage, though I cannot see that dilatation is necessary but in few cases, as an accompaniment.

In Dr. Kelsey's new work on "Diseases of the Rectum and Anus," just issued by Wood & Co., I see no mention of any such method of treatment, but I would strongly advise it before resorting to radical operations.

Very truly yours,
GEO. T. WELSH, M.D.

KEYPORT, N. J., August 14, 1882.

CHLOROFORM NARCOSIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In their eagerness to furnish recent news to the secular press, some of the correspondents of the more extensively circulated newspapers seem not to think, nor to care much, whether the items they supply are likely to affect individuals injuriously or otherwise; and the utter recklessness displayed by some of them in giving rumors or unauthenticated intelligence to the public of a private character has given occasion to uncalled-for and unnecessary pangs of disquietude, if not unhappiness, to such persons as misfortune or accident expose to the rapacity of the newsmonger. This utter disregard of the consequences that might result from the publication of imperfectly understood accidents was strikingly illustrated in the case of a lady who is said to have died from chloroform narcosis in Charleston, a short while ago; and the injury arising therefrom might, and probably would, have proven injurious to the professional business of the gentleman in whose hands the accident occurred had not the South Carolina State Medical Society come promptly to the rescue of an honorable and deserving member thereof. I refer to the action taken by that enlightened body in the case of Professor R. A. Kinloch, M.D., of Charleston, under whose professional care the death of the lady alluded to occurred. Dr. Kinloch's attainments and professional reputation are too well known to require any vindication at my hands, and after a perusal of his clear and manly account of the unfortunate occurrence, as published in the MEDICAL RECORD of the 5th instant, I hazard nothing in saying that it would be difficult to find any physician, *deserving the name*, who would not cheerfully exonerate him from *all* blame in the premises. I have administered chloroform, in civil and military practice, in hundreds of cases, without the occurrence of a single death, and yet such an accident might take place in the very next case in which it is used. In this matter, Dr. Kinloch's professional brethren are almost as much interested as he is personally, and any word said in his behalf should be regarded as defending the whole profession, as all are liable to experience misfortune from the use of anæsthetics. I fully endorse the course pursued by Dr. Kinloch, and the justly distinguished Dr. J. Marion Sims, of New York, in reporting the accident from the agents employed by them, and believe that all deaths taking place under the use of such agents should be promptly made known to the profession through a medical journal, and by the physician under whose professional care the accident occurred, and in no instance should such cases be reported in a secular paper *first*, however well-informed and careful their editors or conductors might be. The reasons for this statement must be obvious to any person of ordinary intelligence and observation.

I am, very respectfully yours
HARVEY L. BYRD, M.D.

127 ARLINGTON AVENUE, BALTIMORE, September 2, 1882.

TRUMPED-UP LUNACY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Your editorial of September 2d, under "Trumped-up Lunacy," interests me, as I was one of the physicians who examined Mr. Silkman.

His statement of my examination is incorrect. I spent one hour and forty minutes with the examination of him, and then formed my uninterested and unbiassed opinion of his mental condition. He was then under arrest. I had presented to me written statements, "sworn to," that he had repeatedly threatened the lives of his friends and children. He had sleepless nights; had an unnatural expression, was overworked, his mind was unsettled, and had attacks of desperation, he said caused by a physical ailment that gave him distress, pain, and interfered with his nutrition. Talked rapidly and incoherently, said he "would rather see his children in the grave than to have them provided for by his friends—that he then could communicate with them in the spirit world, as he had done with other deceased friends." He said he was an investigator and not a spiritualist.

I did not know that he was a member of the Land League until after he was in the asylum. Then, some people doubting his insanity, I wrote to the asylum, and Dr. Jocelin, Assistant Superintendent, replied, "that beyond doubt he was insane." He was transferred to Poughkeepsie, instead of Middletown, and Dr. Kellogg, the Superintendent of the Hudson River State Lunatic Asylum, testified that he did not then think he was insane, but he was on the *border line* of insanity. And repeated evidence came that he had threatened to blow up his children's house, and warned people not to go there; carried an outside window-blind to New York City and pasted verses on it and placed it near his brother-in-law's office to annoy him. Took the keys from his children's house and buried them in the yard to prevent the carpenters from completing the repairs.

I am sure there has been a change in the man from the past—refined and highly educated; to do this and other strange freaks is something more than madness. He has improved physically and, I hope, mentally in the asylum he so much abuses.

A. C. BENEDICT, M.D.

YONKERS, N. Y., September 5, 1882.

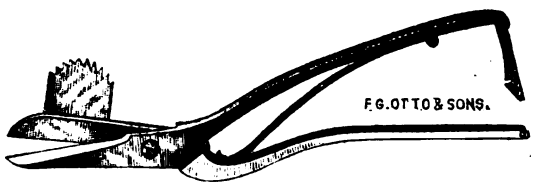
AN ERROR IN DIAGNOSIS.—A man treated for eight months in a hospital for chronic dysentery went home without being relieved. Believing that he had piles, he applied to a physician, who found no evidences of hemorrhoids, but, being interested in the pathology of dysentery, proceeded to explore the rectum, in which he discovered a number of fibrous bands and the original cause of the tenesmus and colitis—a piece of beef-bone impacted above the sphincter. Its removal gave immediate relief, and there was no further trouble.—*Practitioner.*

New Instruments.

PLASTER BANDAGE SHEARS-SAW.

By W. P. WATSON, A.M., M.D.,
JERSEY CITY, N. J.

This illustration conveys a good idea of an instrument, the use of which greatly facilitates the removal of plaster-of-Paris bandages. It consists of Henry's shears slightly modified, *i.e.*, made much lighter, less curved, and blades of equal length, with a convex saw-blade attached to the upper blade. As most of the sawing is done on the pull, the teeth



are pointed backward. In using this instrument in removing plaster bandages, I usually make two parallel incisions with the saw about one-third of an inch apart, on any convenient aspect of the dressing through the plaster to the muslin from end to end of the plaster. The strip of plaster between these incisions is easily removed by using the lower blade of the shears as an elevator, after which the muslin is readily cut through with the shears. The instrument is made by F. G. Otto & Sons, 64 Chatham Street, New York.

A NASAL ELECTRODE.

By F. H. BOSWORTH, M. D.,
NEW YORK.

In an article of mine on nasal catarrh in The Medical Record of June 10th, reference was made to a nasal electrode, for use in cases of catarrh attended with recurrent attacks of temporary stenosis of the nares, due to turgescence of the erectile tissue in the deep layer of the membrane covering the turbinated bones. This turgescence, I believe, to be due in part, at least, to lack of tone in the muscular coat of the venous sinuses. The accompanying cut

illustrates an electrode which I have found of value in these cases. It consists of a silver plate, A, inserted in a thin plate of ivory, B. C is an insulated flexible stem, terminating in a broad piece, into which the conducting cord, D, is inserted, thus doing away with the use of a handle. The electrode is inserted into the nostril with the metal side upon the turbinated bone, after which the circuit is closed by the patient grasping the sponge of the other electrode, or by applying the sponge to the temporal region. The current used should be the mildest possible, and should be continued about three minutes. The application may be repeated in four or five days. My experience has been entirely with the Faradic current, and has been a very favorable one, though the galvanic current may be equally valuable, and probably less painful.

The instrument was made for me by The Electro-Medical Manufacturing Co., 38 Union Square.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 27, 1882, *to September* 2, 1882.

Comegys, E. T., Capt. and Asst. Surgeon. Assigned to duty at Fort Supply, Ind. Ter. S. O. 174, Dept. of the Missouri, August 30, 1882.

Hubbard, Van Buren, Major and Surgeon. Orders to Fort Wingate, N. Mex., revoked. To report to Commanding Officer, District of New Mexico, for duty at Fort Stanton, N. Mex. S. O. 174, Headquarters Dept. of the Missouri, August 30, 1882.

Wakeman, William J., Asst. Surgeon. Assigned to duty at Fort Douglas, Utah. S. O. 91, Dept. of the Platte, September 1, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 9, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 2, 1882.	1	32	24	5	9	31	0	0
Sept. 9, 1882.	0	26	26	1	7	33	0	0

Some Sort of Systemic Poison.—Dr. W. S. Higgins, of Penfield, Illinois, writes: "In the first number of this year Dr. Ward has come very near accounting for so much malaria in altitude that excludes the theory of marsh poison, by attributing it to 'some sort of systemic poison.' I have long been convinced that the *economy generated poison*, when its functions were obstructed by cold damp surroundings sufficient to prevent free exosmosis of effete matter. The retention of that which should be deposited on the surface, sets up a terrible commotion—why not say a sort of *rotting* process begins. When decomposition of animal matter is sufficient to generate bacteria, 'systemic poison,' can we not readily comprehend the situation? To the thoughtful and inquiring mind a hint is sufficient."

The late Dr. James B. Reynolds, New York. —*Whereas* the Medical Board of the New York Foundling Asylum has learned with deep regret and sorrow of the death of Dr. James B. Reynolds, in the midst of his usefulness and in the prime of his manhood.

Resolved, That the board holds in the greatest esteem the remembrance of the active interest our late associate always took in promoting the welfare and prosperity of the New York Foundling Asylum, at one time its only medical officer; how well he discharged the laborious and onerous duties devolving upon him then, the good sisters can well attest.

Resolved, That as a citizen he was upright in all his transactions; as a friend he was supereminent in combining a suavity of manner with a noble and disinterested elevation of mind; as a husband and relative he discharged all the moral and social duties of life with a conscientious regard to affection and love; but as a professional brother and friend his sorrowing colleagues will long have to deplore the melancholy event which deprived them of the aid and counsel of so good and true a man.

Resolved, That we tender our warmest sympathy to the family of our late associate in their bereavement, and that a copy of these resolutions be sent to the family; also, that a copy be entered for preservation, as a minute, in the records of the Medical Board, and copies be forwarded to the medical journals of the city for publication.

J. Lewis Smith,
Joseph O'Dwyer,
Geo. F. Carey,
} *Committee.*

New York, August 31, 1882.

The Seamen's Retreat Hospital at Stapleton, S. I., long and ably conducted by Dr. C. Henry King, has been closed. All merchant seamen will now be cared for at the Marine Hospital, Bedloe's Island, and in the city hospitals. Dr. King has been appointed physician to Snug Harbor.

A Peculiar Medico-Legal Case occurred a few weeks ago in the Glasgow Royal Infirmary. A poor little boy, playing in a court, happened to sit down on a flagstone above a printer's shop. In the flagstone was an aperture, and some one in the shop passed a red-hot iron through this some inches into the boy's rectum. The injury resulted in death two days after. Two apprentices have been apprehended and committed for trial in connection with the affair.—*Cor. of N. E. Med. Monthly.*

Photograph of Small-pox.—In the Tenth Annual Report of the Board of Health of the City of Boston is a fine photographic representation of the typical umbilicated pustules of small-pox, taken on the eleventh day of the eruption.

Hot Applications for Heart-Failure.—A writer in the *Lancet* (Dr. Gill) advises, for heart-failure, the application to the chest of cloths dipped in hot water.

Syphilis by Skin-Grafts.—Another case in which syphilis was conveyed by skin-graft is reported by M. Féréol, in Paris.

The Circumanal Glands.—While operating for piles lately at the Soho Square Hospital, Mr. Reeves took the opportunity of demonstrating to the visitors present an affection of the circumanal glands, which is sometimes mistaken for fistula. The glands become the seat of inflammation, and get overdistended. A probe introduced through the small orifice shows that the cavity burrows for about half an inch in various directions. The best treatment is to slit them up and then to touch the exposed surfaces with nitrate of silver. Curiously, this small source of irritation is not described in any of the books on Surgery.—*Cor. N. E. Med. Monthly.*

Vaccination in Illinois.—Two millions of persons have been vaccinated in the State of Illinois during the last fifteen months. For this reason small-pox has made small progress of late in the State, the disease in the majority of cases having been confined to those first attacked.

Concerning Chewing-Gum. — A correspondent from Boston writes: "Noticing an extract from your columns in regard to the collection and use of chewing- (spruce) gum in Maine, I should like to state that a prominent manufacturer of petroleum products in this city told me some years ago that they sent most of their second class (*i.e.*, not dirty or impure, but softer) paraffine, to make chewing-gum for the Maine market. As he expressed it, they had a lecturer down there who had got every man, woman, and child in the State to using it. They were about to send him out West, and expected a demand for that region."

Carbolic Acid Treatment of Piles.—Dr. E. B. Fenn, agency physician for Sac and Fox Indians, Indian Territory, writes: "I notice in The Medical Record of July 20, 1882, an extract from the monthly report of the Southern Illinois Penitentiary, by Dr. H. Z. Gill, in which it was said a dozen cases of piles had been successfully treated by the hypodermic injection of carbolic acid, with enough glycerine to hold crystals in solution. The following treatment has been successful with me in every case: Take carbolic acid, ninety-five per cent. sol., fluid extract ergot, aa. equal parts. Inject from five to ten drops into each tumor, repeating the operation in a week or ten days if necessary. I have treated a number of severe cases of long standing in this manner, and believe it to be far better than amputating or ligating, because it is less painful, and unaccompanied with any danger whatever to the patient and is equally efficient."

American Academy of Medicine.—The next annual meeting of the Academy will be held at Philadelphia on Thursday, October 26, 1882, the council, under the authority vested in it by the by-laws, having deemed it expedient to postpone it until that date. It is very desirable, in the interest of the Academy, that the membership should be materially increased, so that its influence may be more widely disseminated and the objects of its institution more thoroughly accomplished. At the last annual meeting of the Academy the constitution was amended, so that those who have simply received the degree of A.B. *or* A.M. are now eligible to fellowship, and not, as heretofore, those only who had received the degree of A.B. *and* A.M.

Taking his own Medicine.—Dr. Smith, of Chelsea, Vt., lately prescribed for a patient, who soon after returned ailing more than ever, and suggested that the medicine was poison. Dr. Smith remarked that he had "just as lief take a pint;" so, putting the bottle to his lips, he drank half its contents. Then the doctor's head began to whirl, and he rushed to the drug-store for an emetic, which saved his life. It seems that belladonna had been put in by mistake. The patient was not seriously injured. Happily, there is not yet a vacancy for the waiting medical man. Moral—Medicine is for the sick.

Indications for the Use of the Bath. — "I think a bath daily would be beneficial in your case," said a physician to a patient. "Well, I don't know, doctor," he feebly replied. "I took a bath once, a year or two ago; I felt better for awhile, but it wasn't long before I was just as bad as ever, and I have been growing worse ever since." This is almost equal to the French medical writer, who objected to bathing, because it removed the natural secretions of the skin.

THE CHEYNE-STOKES RESPIRATION.—The phrase, Cheyne-Stokes respiration, means, of course, the kind of breathing described by Drs. Cheyne and Stokes. The first reference to the peculiarity was made by Dr. Cheyne so long ago as 1816. Dr. Stokes recalled this fact to the attention of the medical profession in his classical work on diseases of the heart and aorta, thirty years afterward. He also contributed some additional facts, and hence his name is rightly honored by association with Cheyne's in this suggestive phrase, Cheyne-Stokes breathing. The condition signified by this phrase is a peculiar irregularity of breathing, associated with certain morbid conditions. Not all kinds of irregular breathing can be so designated. Indeed, the term is already misused, and there is a growing disposition to include under it all kinds of breathing associated with irregularity and sighing. As described by Cheyne, and afterward enlarged upon by Stokes, the kind of respiration to which this phrase is properly applicable consists in the following phenomena: A pause in the breathing—a complete suspension in the respiratory acts for a period of time, during which breathing might occur several times in the normal manner; then the resumption of respiration very feebly and slowly, and a gradual and progressive increase in the number and depth of the respirations, until the maximum is reached; and then again a gradual and progressive diminution, in the same order, in the number and depth of the respirations, until a pause occurs. Thus the movements of respiration oscillate, from an extreme in which all the muscles are laboriously engaged, to a minimum in which the respiratory organs seem hardly to act at all, and then a period of repose or of apnœa of longer or shorter duration; to be followed again by the gradual rise to the maximum. During this time of cessation of breathing the arterial tension falls, the pulse quickens, the pupil contracts, there occurs a lateral conjugate deviation of the eyes, the face becomes pale, and the mind—the intellect and the general sensibility—are for the moment obtunded. On the other hand, during the period of maximum activity in the respiration, the arterial tension rises, the pulse slows, the pupil dilates, and more or less cyanosis of the face and extremities appears.

The morbid states with which Cheyne-Stokes breathing is associated consist of certain chronic affections of the heart and arterial system. Stokes laid much stress on it as a sign of fatty degeneration of the heart. It has been observed in cases of aortic insufficiency, especially when caused by the calcareous deposits of senility. The first case described by Dr. Cheyne was one in which atheroma of the vessels led to attacks of cerebral hemorrhage. Chronic arteritis, arteritis deformans, and cardiac lesions arising under the same conditions, are the chief factors. The irregularity of breathing which belongs to tubercular meningitis has been said to have the Cheyne-Stokes type, but there is merely distant resemblance—by no means identity. The irregular respiration occurring in the course of the nervous symptoms of chronic albuminuria approaches more nearly in characteristics to the Cheyne-Stokes breathing; but here again there is resemblance, but not identity.

Cheyne-Stokes breathing is of evil omen, as a rule. This view of its prognostic value is a necessary corollary from its pathogeny. Due to changes in the arterial tunics, which interfere with the normal supply of blood to the medulla, the respiratory centre functionates in a spasmodic manner. The special rhythm of the respiration, which it is the office of the respiratory centre to maintain, is, under these circumstances, perverted. The irregular evolution of the rhythmic force signifies the onset of fatal symptoms, for the damage done to the walls of the vessels must continue in an increasing degree to interfere with the circulation in the medulla. The numerous examples of irregular respiration, bearing a more or less close resemblance to the genuine Cheyne-Stokes breathing, have a prognostic importance determined by the associated and causative lesions.—*Philadelphia Medical News.*

THE GERMAN UNIVERSITIES.—This year's summer session has again witnessed an increase in the attendance at the German universities. The influx of foreigners also continues to augment. All in all there were 23,830 students regularly matriculated. This figure represents an increase of 8,711, as compared with the attendance of ten years ago. Of this number there belonged to Berlin, 3,900; Leipzig, 3,111; Munich, 2,017; Breslau, 1,532; Tübingen, 1,400; Halle, 1,377; Würzburg, 1,091; Göttingen, 1,083; Bonn, 1,061; Heidelberg, 922; Königsberg, 863; Strasburg, 823; Marburg, 766; Freiburg, 721; Greifswald, 659; Erlangen, 575; Jena, 570; Giessen, 435; Kiel, 381; Münster, 326; and Rostock, 236.

SIX MEDICAL JOURNALS are now regularly published in Japan. Surely the Japanese are becoming very much civilized.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.—We have received the announcement of the New York Post-Graduate School. It is now thoroughly organized with a corps of ten Professors, eight Associate Professors, and nine Instructors. The names of the Professors and their departments are as follows: James L. Little, M.D., Professor of Clinical and Operative Surgery; William A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System and of Medical Electricity; D. B. St. John Roosa, M.D., Professor of Diseases of the Eye and Ear; Clinton Wagner, M.D., Professor of Diseases of the Throat; Henry G. Piffard, M.D., Professor of Diseases of the Skin; Frederic R. Sturgis, M.D., Professor of Diseases of the Genito-Urinary Organs and of Venereal Diseases; Montrose A. Pallen, M.D., Professor of Diseases of Women and of Operative Midwifery; Thomas E. Satterthwaite, M.D., Professor of Histological and Pathological Anatomy; Mary Putnam Jacobi, M.D., Professor of Diseases of Children; Edward C. Spitzka, M.D., Professor of Medical Jurisprudence and State Medicine. The list of Associate Professors includes the well-known names of Dr. W. J. Morton, Dr. W. H. Porter, Dr. S. M. Roberts, and others. The Faculty announces that it will endeavor to make available the vast mass of clinical material which this city affords. There will be didactic and clinical lectures, and also laboratory work. The college building is that of the College of Pharmacy, conveniently located on East Twenty-Third Street. There will be three courses of seven weeks each during the winter. The price of tickets for each series of lectures will be $20. The lectures begin November 6, 1882.

THE YELLOW FEVER EPIDEMIC.—The epidemic continues in about the same degree of severity at Brownsville, Texas. From fifty to sixty cases a day are reported. Fortunately, the death-rate is very

low. At Matamoras there are but few cases. The disease has increased at Pensacola, Florida, and is now epidemic there. From eight to ten new cases are reported every day. The inhabitants have been obliged to appeal to the country for aid.

Death of Medical Inspector B. F. Gibbs.—Medical Inspector Benjamin F. Gibbs, of the United States Navy, died last week, at Trieste. He was born in New Jersey. He entered the navy November 12, 1858, as Assistant Surgeon. In 1877 he received his commission as Medical Inspector, the rank he held when he died. His death promotes Surgeon Edward S. Bogert and Passed Assistant Surgeon John C. Wise.

Drug Store Profits.—An out-of-town druggist entered one of Boston's apothecary stores and handed a clerk a simple recipe. "One dollar and fifty cents," said the latter as he handed the medicine over. "Isn't that pretty steep?" asked the customer, adding, "I'm in the business myself, and know somewhat about the cost of these ingredients." "Oh! that alters the case," was the response; "seventeen cents, please."

Iodine Injections in Lymphoma.—Dr. Karl Körbl (*Wien. Med. Woch.*) records twenty-three cases of lymphoma treated by subcutaneous injections. He tried Fowler's solution, carbolic acid, iodoform, etc., for this purpose. Latterly he has used tinc. iodi, and injects into the most prominent part of the swelling a sufficient amount to cause distinct tension. This is followed by much swelling and pain, but by the third day these are nearly gone and massage is then practised. The injecting is to be repeated as may be required.

Faith an Essential Element of Success in Practice.—Dr. Fothergill, in referring to this subject, utters some very sensible remarks. There is no doubt that many physicians make the most lamentable failures on account of their want of faith in therapeutic measures. The effect of the mind on the body is well known, and when the patient sees a lack of confidence in the physician, he is depressed thereby, and the condition is made worse, instead of better. One of the most successful practitioners in one of our Western cities attributes his success in great measure to the faith he himself has in the effectiveness of drugs properly administered, and the confidence that his faith inspires in his patients. Dr. Fothergill says: "If the medical man speak to the patient with doubtful accents and hesitating utterances, he does not inspire confidence; he really sows distrust. This is the explanation of the successful treatment of a case by one man where another has failed, the remedial measures being much the same. The one carries the patient with him to the restoration of health; the other intensifies a morbid state and tends to make it permanent.

"This is a matter too little thought about. Just as a weak-willed medical man fails to do certain patients good; and lack of decision of character unfits a medical man for dealing with emergencies, where the judgment must be prompt and the action energetic; so the therapeutic nihilist, who doubts the efficacy of drugs and leaves the patient to nature, disheartens many patients, and leaves them chronic valetudinarians; while in the hands of an enthusiast the cases would soon move onward to a satisfactory termination. There are some men who are 'doubting Thomases;' there are others who decry what they do not understand, and deprecate remedies with whose potency they are unacquainted, who do infinite, immeasurable harm to their patients. An eclipse of faith in medicines has now existed some time; but the darkness is beginning to move away, and a return of faith, stronger, firmer, more capable of giving a *raison d'etre* for its existence than in the past is dawning—the daybreak of happier times for those who are stricken down with illness, or crippled in their working power by incapacity in their digestive viscera. This therapeutic nihilism is a passing wave of opinion, a temporary mental state, the end of which is at hand; and the sooner it is over the better for all. The patient's prospects will be all the brighter, the medical man all the happier for feeling that the patient has got some 'value received' in return for his outlay. A healthier condition of thought on matters medical will generally obtain; for quacks, charlatans, and irregular practitioners of all kinds are to a great extent fostered by the recent want of faith in the medical profession. When a man is sick, what he wishes is to get well; the means to him is a matter of comparative indifference."

Removal of Plaster-of-Paris Bandages.—Dr. F. H. Murdock, of Bradford, Pa., says: "A very convenient way to move a plaster-of-Paris bandage is as follows: Take a strong solution of nitric acid, and by means of a camel's-hair pencil paint a strip across the bandage at the most desirable point for division. The acid will so soften the plaster that it may be readily divided by means of an ordinary jack-knife."—*Nashville Journal of Medicine and Surgery.*

College of Physicians in Ireland.—Two important appointments in the gift of the Fellows were recently filled, viz.: the King's Professorship of the Practice of Medicine, and the Professorship of Midwifery in the School of Physic of the University of Dublin. Dr. J. Magee Finny, a graduate of medicine of Trinity, was elected King's Professor of Medicine. For the chair of Midwifery there were six candidates—Dr. J. Rutherford Kirkpatrick being successful.

For Toothache a saturated solution of chloral hydrate in glycerine is recommended.

Venesection.—Dr. Fordyce Barker advocates greater frequency of this now nearly obsolete measure. He is convinced that in certain cases it is essential to bleed the patient, and that life may be saved thereby.

Hofrath Franz Ritter von Skoda, in memory of his deceased brother, Professor Dr. Joseph Skoda, has just presented to the Burgomaster of Vienna the munificent sum of 20,000 Austrian florins as a contribution to the Charitable Fund.

A Heavy Brain.—Dr. Halderman, of Columbus, is responsible for the following (*Cincinnati Lancet and Clinic*, July 22, 1882): "The subject was a mulatto man, named Washington Napper, aged forty-five, who died recently in St. Francis Hospital, this city, of blood-poisoning, induced by abscess of the thigh. He was a native of West Tennessee, and was a slave till 1862, when he deserted his master and afterward came North with the Forty-Sixth Ohio Infantry to this place, which he made his home until the time of his death. His brain was found to weigh sixty-one ounces. He was about six feet in height, and of rather ungainly build; had long, ape-

like extremities, massive head, and coarse physiognomy, thick lips, protuberant lower jaw, high cheek-bones, but lofty and expanded frontals. He was never regarded as of much intellectual brightness, but is spoken of as having been of rather reserved and thoughtful disposition; and, later in life, to have become of quite a moral and religious turn of mind. He was illiterate, but managed, by industry as a common laborer, and by close economy, to accumulate some little property, which, on his death-bed, he bequeathed to his church and to the Sisters of the Poor, in return for their care of him during his fatal illness. It will be observed that but two brains, whose weight are credited by scientists, are on record heavier than this, namely, those of Cuvier and Abercrombie: the former, as is well known, weighing 64.33 ounces, and the latter, 63 ounces. So that if, as is held by some, intellectual greatness lies in the quantity of brain substance alone, who knows but with this man passed away another whose—

> 'Hands the rod of empire might have swayed,
> Or waked to ecstasy the living lyre?'"

Muriate of Pilocarpin in Diphtheria.—Dr. Franklin Townsend, of Albany, N. Y., writes: "I almost feel it incumbent upon me to report, through the medium of your excellent columns, seventeen cases of diphtheria, occurring during the months of April and May last, in my practice among the children of the Babies' Nursery of Albany. The treatment adopted, and persevered in throughout the whole number of cases, was that as recommended by Guttmann only a few years ago, and which has now become so well known by the profession. I refer to the use of the muriate of pilocarpin.

"Five of the seventeen cases that came to my notice were exceedingly malignant and severe, the nasal mucous membrane, as well as the post-pharyngeal wall and soft palate, being deeply involved by the diphtheritic exudation. The remaining twelve cases were also more or less severe, but the diphtheritic deposit here simply implicated the pharynx and soft palate. Out of the whole number infected, only *one* died; this being one of the five cases, where the nasal mucous membrane was involved by the morbid process.

"That the little ones were suffering from diphtheria there can be no doubt, I think, as several prominent medical gentlemen saw many of the cases with me in consultation, and were able to confirm the diagnosis. From this experience, small as it undoubtedly is, but made comparatively large, when coupled with that as already published by others, I fain would take the liberty of urging upon the profession the propriety of testing further the utility of the muriate of pilocarpin in this much-dreaded disease before its condemnation becomes a matter of course."

Bearded Infant.—The *Tiempo*, of Valencia, notes the birth of an infant with a well-developed beard and a full set of teeth.

Deformity of the Middle Ear.—Dr. Samuel Sexton describes a malformation of the sound-transmitting mechanism of the middle ear in the *American Journal of Otology* for October, 1881. These anomalies, which seem to have been studied with much care, serve to explain the origin of some of the more obscure and intractable cases of deafness so common in early life. The defect consists in a perverted development of the membrana tympani and the consecutive displacement of the ossicles, especially of the malleus and incus. The membrane's anomalistic position is emphasized by the unusual position of the manubrium, which is found to be deflected upward and to lie somewhat parallel to the posterior fold of the membrana flaccida. Owing to these misplacements the membranous structure lying above the malleus handle is thrown into two or three folds which radiate, fan-like, from the short process of the malleus. Behind these folds the long process of the incus is frequently seen.

Viewed as a whole, the entire upper segment seems to be thrust outwardly by the malposition of the malleus, whose prominence is increased by the displacement. The unusual prominence of the short process especially gives the membrane the appearance of being raised above its normal plane and produces the folds alluded to. Lesser folds are formed in the same way—by the stretching of the membrana tympani over the malleus—which for the most part extend anteriorly.

The retracted inferior segment is also frequently relaxed, and the malleus handle, besides its deflection in the direction described above, is more or less foreshortened. The frequent coexistence of chronic catarrhal inflammation of the middle ear in these cases nearly always gives the membrane a characteristic appearance.

Dr. Sexton, in seeking for an explanation of this very common deformity in the ears of young people, first gave his attention to the natural conditions which influence the development of these parts: it is well known, he says, that the membrana tympani requires the presence of air on both its external and internal surfaces for its development as well as for the performance of its functions. The tympanum, comprising the superior terminus of the air-passages, may be considered to be as dependent for its development on a normal air-supply as the pulmonary structures themselves, and when, therefore, from any cause during the developing period of childhood, the usual intra-tympanic air-renewal fails, an anomalous development of the conductive mechanism ensues. And it is not difficult to see how this takes place, since at birth the membrana tympani lies in an almost horizontal plane and is immovably attached to the annulus tympanicus which, it should be borne in mind, develops *pari passu* with it. Now, while the circumference of the tympanic membrane gradually assumes its more perpendicular aspect, the unresisted atmospheric pressure upon its external surface depresses it toward the inner wall of the tympanic cavity.

While development is proceeding under these unfavorable conditions, traction is in the meantime kept up by the membrane until the malleus handle is diverted from its articulation with the unyielding os temporis to a greater or less degree. In the ensuing deformity the incudo-temporal and malleo-incudal articulations are also liable to be more or less affected.

As regards the causes which prevent intra-tympanic air-supply, the author mentions among others the structural changes which interfere with the physiological movements of the pharyngeal muscles, or offer a mechanical obstruction to the entrance of air into the guttural mouths of the Eustachian tubes. Such causes include chronic nasal catarrh and its consequences, and enlargement of the tonsils. Chronic catarrhal inflammations of the middle ear, and of the Eustachian tube also exert a certain influence in these cases. Indeed, any interference with normal respiration which induces

habitual mouth-breathing prevents intra-tympanic air-renewal, since this is accomplished by the gentle tympanic inflation which takes place during the expiratory act; its withdrawal being brought about by the succeeding act of inhalation.

The author believes that this perverted development during the transition period of early life is of very common occurrence, for he has found the characteristic changes above referred to in the tympanic membrane of children at a very early age, even before it was practicable to estimate with accuracy the degree of impairment of hearing. The deformity very often incapacitates children very much as regards their early acquisition of language; and where the tympanum of the newly born has never been aërated, the ear is entirely deprived of the service of its sound-transmitting mechanism, and deaf-mutism results.

Fortunately, however, deafness is not invariably complete in these cases, and improvement may naturally be looked for in certain instances where the causes disappear with advancing age or by means of treatment. The characteristic disfigurement remains, however, in most cases, a permanent feature, and moreover it is usually found in both ears.

It is in some of these cases that forcible inflation of the tympanum distends the much-relaxed lower segment of the membrana tympani, drawing the malleus handle outward and downward, and thus putting the transmitting mechanism in a more favorable relation for the transmission of sound, that such marvellous, but temporary, improvement in hearing is accomplished.

Centenarians.—There are three hundred and fifty-nine persons in Prussia who are over one hundred years old. Of these one hundred and twenty-eight are men, two hundred and thirty-one women. Only twelve men and nine women had been unmarried.

Some Facts Concerning Leprosy.—We are in receipt of the Board of Health Report, published at Honolulu, for the biennial period ending March 31, 1882. It contains an interesting account of an official visit made by Dr. Emerson to the leper settlement at Kalawai Molokai. In his report the writer briefly considers some of the theories and views in regard to the nature and sanitary management of leprosy. The assertion that leprosy is but a fourth stage of syphilis, he holds to be unsubstantiated by any medical authority whatever. Historically the former antedates the latter by centuries. Neglected and untreated syphilis is common enough, but it never runs into leprosy. Syphilis produces only syphilis, leprosy only leprosy. Again the latter appears in groups, affecting families and people living together; it does not occur sporadically. In order to satisfy the condition of the "fourth stage" argument, it must be clearly proven that every leper was first syphilitic, and that none but those having syphilis in the advanced or third stage have shown leprosy, the so-called "fourth stage." There are, however, many cases of uncomplicated leprosy among the Hawaians who have been and are free from syphilis. Owing to a want of distinction on the part of the natives between a simple venereal sore and a true chancre, a Hawaian will be likely to say he has had syphilis (kaokao, or pala), when he has merely had a non-syphilitic venereal ulcer. On the theory of "hereditary immunity" of Erasmus Wilson, the Hawaians who have had a century of syphilis, ought by this time to have purchased some amelioration in the disease. As leprosy, however, is vastly more severe and stubborn than any stage of syphilis, the "fourth stage" doctrine seems illogical. The writer then indicates some of the points of differential diagnosis between leprosy and syphilis. Too much emphasis, he continues, cannot be put on the fact that leprosy is a contagious disease, or at least capable of communication from the leper to the well person. The germs lie latent for many years; but at length they produce a crop, and they finally kill. "Our whole theory of leprosy rests incontestably on a sad fact," write Danielson and Boeck, "it is that within the bounds where it commits its ravages, it can be made harmless to the rest of the people only by isolation." Experiment with any other theory than this is dangerous. The victims among the white people are few because, firstly, the latter are more careful than Hawaians in their choice of companions, and secondly, because the whole number of whites in the country is comparatively small.

Registration of Midwives.—A bill is to be brought into the English Parliament by the General Medical Council, providing for the registration of midwives. There are over ten thousand women in England practising as midwives.

Unhealthy Seaside Resorts.—The consternation excited at Seabright, recently, by the appearance of typhoid fever at one of the hotels, has had a parallel at Brighton, England. The *Lancet* announced one week that the place was unhealthy, the drainage bad, and that visitors were in constant danger of blood-poisoning. Much alarm was excited; many persons left, and the hotel trade was so much injured that a suit has been brought by the town authorities against the *Lancet* for damages. Investigation hardly confirms the statements of the *Lancet*, although they undoubtedly had some foundation.

Dr. Chiéne has been appointed Professor of Surgery in Edinburgh University, in place of the late Prof. Spence. The appointment is received with considerable criticism. It is thought in some quarters that the best man was not selected.

Arsenic and Iodine in Intermittents.—Dr. G. N. Jennings (*American Medical Weekly*, July 22, 1882), says that he has had the best success in intermittents with equal parts of tincture of iodine and Fowler's solution, given in ten-drop doses after meals.

Very Much Behind.—Although it is now a year since the International Medical Congress was held, some of the German and French journals have not yet finished filling their columns with the proceedings.

A New Function for the Cerebro-spinal Fluid.—Dr. Bechterew, of St. Petersburg, has made experiments upon dogs, in which he removed the cerebro-spinal fluid from the third ventricle. He is of opinion that this fluid, circulating in the third ventricle and aqueduct of Sylvius, has a function in preserving the equilibrium. It acts similarly, he thinks, to the fluid in the semicircular canals.

Bromism in a Nursing Child.—Lowry reports a case (*Gaz. des Hôp.*) of a woman who, while nursing an infant, was taking gr. xxx. potassium bromide a day. The infant speedily emaciated, became anæsthetic, and showed signs of potash in the urine. On removing the child from the breast it speedily recovered.

Original Lectures.

LECTURE ON HÆMATURIA.

By ALEX. W. STEIN, M.D.,

SURGEON TO CHARITY HOSPITAL, ETC., NEW YORK.

Hæmaturia, or the passage of blood with the urine, is a symptom common to a variety of diseases affecting the urinary apparatus, and it is often a matter of considerable difficulty to determine the source and cause of such a loss of blood. I cannot lay down any fixed rules that shall invariably serve you in making a diagnosis, but I believe that a careful notation of the history and symptoms, together with the chemical and microscopical examination of the urine, with certain manipulations to be mentioned, will, in the majority of cases, enable you to come to a satisfactory conclusion relative to the nature of the case. Hemorrhage from the urinary apparatus may assume one of three forms, viz.: 1, hæmoglobinuria, or the escape simply of the coloring material of the blood with the urine; 2, parenchymatous hemorrhage, or capillary oozing of blood; 3, free hemorrhage from rupture of large vessels. In examining a case of suspected hæmaturia the questions which will naturally present themselves to you are: 1st. Is it a case of hæmaturia? 2d. From what point of the urinary apparatus does the blood come? and 3d. What is the cause of the hemorrhage? In deciding the first question you must know that a peculiar coloration of the urine, not unlike that indicating the presence of blood, may be produced from various causes. The internal administration of rhubarb, santonine, senna, logwood, and various other substances will, under certain circumstances, impart a color to the urine easily mistaken for blood. In order to impress this fact upon your mind, let me give you a simple illustration. Here is a sample of urine passed by a patient in Ward 9, this morning, to whom was administered last night one ounce of the syrup of rhubarb. It has now a clear amber color, and litmus indicates its acid reaction, but if I add a little aqua ammonia, so as to render the urine distinctly alkaline, the whole strikes a purplish red color. If once more I change the reaction by a few drops of acid, the urine again assumes a natural amber tint. You thus learn that to alkaline urine rhubarb (and other substances) lends a coloration which might at first sight be easily mistaken for blood, and as this mistake has been repeatedly made, I guard you against it by reminding you that associated with bladder disease, in which you might naturally expect hæmaturia, you very commonly have an ammoniacal condition of the urine, and it is important to question the patient whether he has taken for food or medicine anything which is likely to produce this change of color, and it is always well to resort to the acid test, which will at once indicate whether the coloration is due to some vegetable coloring material or to blood. If it is the latter, no change will be effected, but the addition of the acid in coagulating the albumen, which is always present in some quantity with blood, will confirm your diagnosis. Generally, however, bloody urine is characteristic enough, if it is not so to the unaided sight the microscope will set aside all doubt, for it is only in hæmoglobinuria that the blood-corpuscles are absent. and then we have to resort to the special tests for hæmoglobin. The spectroscope, you know, is unerring in detecting the smallest quantity present. Bloody urine varies in color from a bright red to a reddish-brown, dirty or smoky hue, all depending upon the quantity of blood present, and the length of time it has remained in contact with the urine. In hæmoglobinuria the urine is always of a smoky or brownish color, and so it may be also in parenchymatous or capillary hemorrhage. This is due to the deoxydizing influence which the urinary constituents exert upon the red oxyhæmoglobin, converting it into a brown methæmoglobin. This conversion can only take place when the escape of blood is very gradual, or the corpuscles have remained for some time mixed with the urine. Parenchymatous hæmaturia may, however, be distinguished from hæmoglobinuria by the presence of red corpuscles. These can always be found in large numbers under the microscope, although the destructive influence of the urine upon them is manifest not only in the change of color, but also in the change of shape, size, and general appearance. In order to appreciate how much blood or rather how little blood is sufficient to bring about the changes of color mentioned, let us take an ounce of urine and add one or two drops of blood, you observe that almost immediately the fluid takes on a dingy, smoky hue; if we add eight drops. it already becomes a deep cherry-red, while the addition of from twenty to twenty-five drops renders it indistinguishable in color from the pure blood contained in this bottle. So you see very little blood shows for a good deal. Allowing these glasses to stand for a short time, you will note the metamorphic influence of the urine on the corpuscles, especially on this last specimen, in changing color from a blood-red to a dark brown.

The next question, often a perplexing one to answer, is, from what point of the urinary apparatus does the blood come? This will involve the following considerations: 1, time of appearance of blood in its relation to micturition; 2, color of the urine and quantity of blood it contains; 3, appearance of coagula; 4, results obtained from certain instrumental manipulations.

In regard to the first, (*a*) blood may flow during the intervals of micturition; (*b*) it may appear at the beginning and again at the end of micturition (very rarely); (*c*) it may appear only at the end of micturition; (*d*) it may appear at the beginning and remain uniformly mixed with the urine to the end. When blood flows from the urethra during the intervals of micturition it does so from some portion of the canal anterior to the compressor urethræ. The source of the hemorrhage is made out from the fact that the blood flows continuously or can be made to flow from some portion of the canal by pressure, or else the blood coagulates in the urethra and remains there until washed out in thread-like or worm-like coagula with the first gushes of urine. The diagnosis of hemorrhage from the anterior urethræ rarely presents any difficulties, and inasmuch as the blood is not passed with the urine, excepting as it is washed out from the urethra, it does not properly belong to the subject under consideration. The question of greater interest is the recognition of the hemorrhage, as it may come from behind the compressor urethræ and between it and the vesical sphincter; second, from the vesical neck; third, from the interior of the bladder; and fourth, from the kidneys. Blood issuing from the prostatic sinus rarely escapes at the meatus during the intervals of micturition, it may coagulate, or some portion of

blood may enter the bladder, though this, too, is exceptional; the urine may contain blood at the beginning and again at the end of micturition, or more commonly a few coagula appear with the first urine, and bright blood with the last. Characteristic of hemorrhage from the vesical neck is the markedly bloody appearance of the urine that comes with the last expulsive act of the bladder, this may be differentiated from prostatic hemorrhage in that in the latter case catheterism will give issue to clear urine.

The differential diagnosis between vesical and renal hemorrhage is sometimes especially difficult. In all obscure cases our conclusions will rest chiefly on the evidence, symptomatic and physical, to be obtained of disease of the bladder or of the kidneys, respectively, and on the evidence furnished by the urine after careful examination, as to its reaction, specific gravity, color, appearance, and shape of coagula, presence of renal casts, pus, or other products of disease.

When the hemorrhage proceeds from the kidney, the urine is usually of a smoky or of a brownish hue, and of an acid reaction, while urine of florid red color, with alkaline reaction, is more indicative of vesical hemorrhage. The first condition of urine indicates a hæmoglobinuria, or at most a parenchymatous hemorrhage, the forms of hemorrhage most frequently met with as coming from the kidneys; the blood oozing from the vessels at once mixes with the excretion, and the urinary constituents have ample time to effect a reduction of the red oxyhæmoglobin into a brownish methæmaglobin, and as the quantity of effused blood is small, its alkalinity is insufficient to effect the normal reaction of the urine. The blood-red urine is significant of rupture of larger vessels, a condition more commonly met with in vesical hemorrhage. Here the blood, being poured out in large quantities, its presence occasions a stimulus to expulsion before the urine has had time to effect its metamorphic influence upon the corpuscular elements of the blood, and the urine retains its blood-red color.

Nevertheless, you cannot rely on the color of the urine alone as a diagnostic sign; it is only a presumptive evidence of the seat of trouble, for the smoky urine may result from a scanty parenchymatous hemorrhage from the bladder, while the bright red urine may represent a free hemorrhage from the kidneys.

In the parenchymatous variety, the blood diffuses itself so thoroughly with the urine that no coagula are formed, but in free hemorrhage the examination of the clots, as to color, consistence, shape, etc., furnish most important data for diagnosis. If the hemorrhage has been recent, the coagula will be soft, and of a dark red color, but if the time of its occurrence is more remote, and the coagula have consequently remained longer in contact with the urine, they will have a firmer or fibrinous consistence, and will appear fleshy or colorless. A soft, reddish, shapeless, coagulum affords little information as to the source of the bleeding; the hemorrhage may be vesical, but it may also be renal, for the blood may flow in a fluid state into the bladder, and coagulate after it gets there, but often the coagulum assumes a definite and characteristic shape, taking the impression of the cavity in which it is formed, and then it becomes an element of the greatest value in diagnosis. If, for example, you find long, cylindrical, or worm-like coagula, and you are at the same time certain that such coagula have not been formed in the urethra, you may be equally certain that the point of hemorrhage is above the bladder, from the pelvis of the kidney, or from the substance of the organ itself, and that the blood in descending has coagulated in the ureter, and represents the cast of that tube. Such clots, too, in their transit toward the bladder, are apt to occasion symptoms not unlike those due to the passage of a renal calculus. If, added to these signs, the microscope reveals blood-casts of the uriniferous tubules, the evidence of renal hemorrhage is complete. In examining a mass of clot always put it in water, let it float and unravel; by so doing, you will get a better idea of the shape and character of the original cast. If the hemorrhage has been intermittent, the clot will appear stratified, layer after layer peeling off in the water. Bladder clots are irregularly shaped, flattened masses, bevelled off and fimbriated at their edges. Prostatic clots often assume the ovoid configuration of the cast in which they are moulded, while those formed in the urethra, anterior to the prostate, are long and round.

In making a diagnosis as to the source of the hemorrhage, you must look, I repeat, to the subjective as well as to the objective signs, and consider the circumstances which are well known to produce bleeding at the different localities of the urinary tract. But if you are still in doubt as between vesical and renal hemorrhage, take a full-sized flexible catheter, introduce it gently and just far enough to draw off the urine. then wash out the bladder with a few ounces of water, and repeat this several times; if the water so injected comes away each time tinged with blood, you conclude that the hemorrhage has its origin in the bladder; if, on the contrary, after the first washing, it comes away clear, the inference is that it does not come from the bladder. Again, having washed out the bladder, you allow the catheter to remain for a few minutes, the urine trickling from the ureters will escape at once by the instrument, and if the urine so collected appears bloody, you have a pretty positive assurance that the source of the hemorrhage is beyond the cavity of the bladder.

In looking for the source of the bleeding, you will, in the majority of cases, discover the cause. Renal hæmaturia results from traumatism in all conditions of hyperæmia, as during the exanthematic fevers, in acute nephritis, or as produced by overdoses of cantharides, turpentine, and other drugs. In purpura and scurvy, and from parasites, tumors, calculi, etc. Among the more common causes of vesical hæmaturia may be mentioned injuries of any kind, vascular and malignant growths, presence of heavy, rough calculi, passive congestion, determined by too rapidly evacuating a greatly distended bladder, inflammation, ulcerative, tuberculous, diphtheritic and croupous. These affections express themselves generally in well known and unmistakable symptoms. Hæmaturia is sometimes vicarious to the menstrual flow. A varicose condition of the veins at the neck of the bladder is occasionally the source of free hemorrhage. This condition, although not very common, presents itself in persons subject to hæmorrhoidal affections, one condition supplementing the other, the dependent position, abundance and close relationship of the vesical plexus of veins at the neck of the bladder with those of the rectum account for this. Hemorrhage from this source is apt to occur at intervals of from a year or more to one or two months or oftener; it comes on suddenly without any apparent cause.

There is an absence of all symptoms or physical signs of disease of the bladder, or of any portion of the urinary tract. The patient feels well, unless the hemorrhage is free or too frequent, when he may become decidedly anæmic and exhausted.

Langier (*Gaz. des Hôp.*, No. 81, 1854) mentions a case in which the bleeding was so profuse as to cause death. At the autopsy large varices were found at the neck of the bladder, upon one of which was a large ulcer. In other respects the bladder was perfectly sound. A similar case occurred in our Workhouse Hospital, Blackwell's Island, not very long since. Dr. Marie Vogtlin (*Wien. Med. Woch.*, 1879) reports an interesting case of a large varex projecting from the posterior wall of the bladder at the point of junction with the urethra, the exact point with which the cervix of an excessively retroverted uterus had been in contact, interfering with the circulation and causing distention and final bursting of the vesical veins. A large Hodge (ring) pessary was applied, after which no further trouble ensued. Endemic hæmaturia, so-called, is a remarkable form of hæmaturia occurring chiefly in Egypt, at the Isle of France, Mauritius, Brazil, and at the Cape of Good Hope. It is due to the presence of a minute parasite known as the Distomum hematobium, or the Bilharzia hematobium, a name given to it in honor of Bilharz, who discovered it in Egypt in 1851. The parasite is supposed to enter the body with the food and drink. In Egypt it is said to inhabit the waters of the Nile, and it is believed that only those who drink this impure water or eat salads, etc., which have been sprinkled with it are affected with this form of hæmaturia. The parasite entering the intestinal canal makes its way into the veins and by predilection into the more or less dilated veins of the rectum. From thence it passes into the veins of the bladder (sometimes the pelvis of the kidney and ureters are also affected) where the female deposits her eggs. The eggs, which are produced in large quantity, soon obstruct the smaller vessels, these latter rupture at various places and the eggs with some blood escape into the surrounding tissues. The parasite, its ova and embryo, can always be found in the urinary deposit. Finally, I must make mention of a peculiar affection known as "paroxysmal hæmoglobinuria," characterized by the sudden advent of hæmoglobin in the urine of individuals in apparent health. This mysterious affection is ushered in by shivering, resembling the chill of ague. The extremities and ears are cold and bluish, and the temperature at this time is subnormal, a dull aching is often complained of in the region of the loins, sometimes headache, nausea, and vomiting. Following this, very soon comes a period of reaction in which the temperature rises, and now the urine suddenly appears discolored, varying from a smoky to brownish or reddish brown color. Under the microscope, much granular matter is found, consisting of the detritus of blood-corpuscles, epithelial and hyaline casts, with oxalates and urates. If red corpuscles are found they are very few and altered in appearance. Chemical tests reveal the presence of hæmoglobin and the characteristic bands of this substance are shown by the spectroscope. Albumen is always present. After this urine has been voided, the other symptoms cease and the patient experiences relief. The dark color of the urine disappears at times with the first micturition, sometimes it continues discolored for weeks, but usually this is less apparent with each act of micturition, and the next day the urine has regained its natural appearance. The attacks come on at intervals, varying from a few hours to several years, with no regularity or periodicity like that of ague. In the intervals between the attacks the general health is good and the urine appears quite natural, all abnormal ingredients disappearing with the other symptoms, occasionally a trace of albumen remains for a longer time. The cause of this malady is obscure. Malaria, gout, rheumatism, scrofula, syphilis, hepatic derangements, traumatism, and many other causes have been repeatedly suggested and as many times rejected. One thing only we know, that exposure to cold is almost invariably the exciting cause. It is noteworthy that no attacks occur during the night, while the individual is warm in bed. It occurs in infancy as in old age, and in both sexes, though more frequently in the male. Of the pathology of this affection nothing positive is known. It has never proved fatal, and consequently no opportunity has offered to examine the parts concerned. That the kidneys are not the seat of any organic change would be indicated by the fact that after the attack is over, the renal function is perfectly restored, this, notwithstanding the attacks may have been frequent. By many it is regarded simply as a paroxysmal neurosis of the vaso-motor nerves, the mechanism being an increased vascular tension in the renal glomeruli, disintegration of the red corpuscles, and the escape of hæmoglobin through the intact walls of the capillaries. The theory of arterial tension is sustained by the fact that associated with hæmoglobinuria, there is albuminuria. The question, what causes the disintegration of the corpuscles, where does this take place, remains unanswered; by some it is supposed to occur in the kidney, others believe it takes place in the blood, possibly by contact with the bile acids, the liver being with the kidneys under the influence of the vaso-motor neuroses. In support of the view that the changes occur in the blood, we have the statements of Hayem and also Mesmit, that they have found hæmoglobin in the serum of the blood during the attacks. More substantial evidence, however, is needed on this point.

In regard to the gravity of hæmaturia, *per se*, independent of the causes that produce it, I may say that slight hemorrhages, repeated, after a time exhaust the patient and produce a condition of cachexia which gradually leads to death, while free and rapidly fatal hemorrhages have ensued from lesions in themselves quite insignificant. Again, the accumulation of clots in the bladder are often a source of intense suffering to the patient, provoking violent spasms of the viscus, with retention of urine and great distention of the bladder. This condition demands the most prompt and judicious interference, both for the relief of the patient and for the prevention of serious, if not fatal sequelæ, such as suppression of urine, uræmia, etc.

The treatment of hæmaturia will depend upon the seat and cause of the hemorrhage, and it will be radical or palliative, according as the cause is removable or not. If the cause is not well ascertained, or if ascertained, cannot be removed, the following is the outline of treatment to be adopted: 1. Absolute rest must be enjoined. If the hemorrhage is due to the presence of a calculus the horizontal posture, with elevated pelvis, will of itself be sufficient to cause the hemorrhage to cease, but the recumbent posture is in all cases of the first importance, unless possibly in malignant disease of the kidney, when, as the late Bence Jones used

to insist, the bleeding would be greatest when the patient was warm in bed. 2. Subdue vesical spasm and pain, tranquillize the nervous system, and reduce the force of the circulation. For this purpose opium and veratrum viride are the great remedies, but they should be given in doses sufficient to produce the effect desired. The miserably small doses of opium, often given in these cases, is worse than useless. 3. Derivate from the seat of congestion. In congestion of the prostate or vesical neck, especially in varices of the bladder, the least tendency to constipation must be overcome. If the hemorrhage is due to renal congestion, cupping over the loins, diaphoretics and hydragogue cathartics will relieve and afford physiological rest to the kidneys. 4. Seek for and remove all pressure or mechanical impediment to the return pelvic circulation. 5. Constringe blood-vessels. Ergot, gallic acid, sulphuric acid, iron, matico, turpentine, alum, lead, and the host of other astringents that have been recommended for this purpose, will lead you to infer that you cannot pin your faith on the value of any one drug. Sometimes one, sometimes another, will seem most efficacious, again all will disappoint you in turn, although given—as they must always be—in large and frequently repeated doses. 6. Local treatment, always more satisfactory, consists in the application of iced water or ice bags to the loins in renal hemorrhage, or to the hypogastrium and perineum in vesical hemorrhage. Pieces of ice may also be pushed up the rectum or vagina. In vesical hemorrhage, the temptation to inject the bladder should not be yielded to until the above means prove to be inadequate, then a flexible catheter, open at its extremity, should be introduced as far as the vesical orifice, and cold water or an astringent solution, such as tannin, iron perchlo., alum, or argent. nit. may be injected with good effect. But great care and gentleness is necessary in these manipulations to accomplish the maximum of good with the minimum of harm. Finally comes the important question, what shall be done with the clots that sometimes accumulate in large quantities in the bladder? If they do not interfere with the functions of the bladder or otherwise occasion distress, leave them undisturbed. The coagula—exercising pressure and acting as a foreign body inducing contraction of the bladder walls—constitute nature's very reliable means of arresting hemorrhage. In the majority of cases it is not only unnecessary, but useless and even harmful to interfere. Unnecessary, because there is no danger of the coagula not finding their way out of the bladder by nature's unaided efforts. Useless, because if the clots are removed before the hemorrhage ceases, they are pretty sure to be reproduced and harmful because any mechanical interference, however gentle, is apt to induce a renewal of or an increase in the flow of blood. On the other hand, however, the coagula may occasion so much pain, vesical spasm, difficulty in micturition, retention of urine, and inordinate distention of the bladder, that immediate relief is absolutely demanded, not only to prevent functional impairment of the bladder or kidneys, but even to preserve life. Under these circumstances the clots may be removed either by repeated injections of small quantities of water, alternating perhaps with some astringent solution which will act favorably both on the bleeding surface and on the clots, facilitating their escape, or the bladder may be evacuated by aspiration. The catheter employed should be of large calibre and with as large an eye as possible. Let me again enjoin upon you great care and gentleness in these manipulations, and to guard against two things, namely, that you do not augment the distention of the bladder by throwing in more fluid than comes away after each injection, and per contra, that you do not empty the bladder too precipitately, for by so doing you not only favor the occurrence of passive hemorrhage, but endanger the subsequent functional integrity of the bladder. It is a safe rule, that the longer the bladder has been over-distended, the longer should be the time occupied in removing the hydrostatic pressure to which it has been accustomed. Hence it is a good plan at first to inject nearly as much fluid as has been drawn off, so that the bloody urine and clots are simply replaced by the injected fluid and afterward allowing the bladder to empty itself by degrees, occupying, perhaps, many hours in so doing. If the bladder cannot be relieved by injection and aspiration, it may be necessary, as a *dernier ressort*, to open the urethra in front of the prostate and reach the clots in that way.

Original Communications.

SCURVY.

By FREDERICK SCHWATKA, M.D.,

LIEUTENANT, U. S. ARMY.

Upon my first visit, during the winter of 1878–79, to the American whaleships wintering in the ice at Marble Island Harbor, North Hudson's Bay, in order to procure dogs from the Esquimaux for my proposed sledge journey to King William's Land during the summer of 1879, I came in contact with a great deal of scurvy—that bane of the Arctic sailor. Prevailing as it did among the ships, and in the large number of crews, with heterogeneous nationalities and temperaments, and seeing the various methods employed to combat the evil, I gained an insight into the scourge which I could not have had in such a comprehensive manner under any other circumstances. This, combined with my after experience, although of a negative nature—as my party never suffered from the complaint—and the researches of others, offered me a rare opportunity to narrow the disease within more definite limits than now exists, especially in regard to its causation, which has had such a wide field accorded to it in the past by Arctic and other writers.

There is in the animal and vegetable kingdoms a definite but unknown vital property or principle which exists in the living state, and which disappears more or less rapidly after the so-called death of the organism. Death, in a legal or religious sense, is sufficiently established when the visible manifestations of life have ceased and the organism is beyond resuscitation, but any one familiar with even the rudiments of physiology knows that death is a process, a series of steps which no one has yet had the boldness to tell us which is the last, and which is the harder to determine, the lower the form of life. This death is very rapid in the animal, but slower in the vegetable kingdom, and all of the efforts made by man in desiccating, preserving, curing, or otherwise preparing the foods derived from these two kingdoms, seems inadequate to completely retain this mysterious property, so absolutely essential

to maintain a healthy state in the omnivorous human. The retention of this principle, whatever it may be, is more easily accomplished with fruits, grains, and vegetables, owing to their slower death, as already noted, than with animal food, and it is therefore to them that we must look for our main supply of those articles of diet which are prepared at home for an Arctic expedition; yet the fact must never be lost sight of that they are, after all, only approximately *fresh* food, and not to be wholly depended upon.

The greater variety of animal life in the frigid zones over the vegetable—the latter having hardly an edible representative in the whole Arctic flora—makes it, after all, the main dependence on which the polar voyager must rely to secure exemption from that disease which must enter into all his calculations. Every exertion should therefore be made to make the procurement of game as certain as possible, by being well provided with the very best of arms and ammunition, and hunting and fishing implements, and above all, with good native hunters, who, from habit and acclimatization, are superior to any others in these bleak frozen localities.

The prime essential causation of scurvy is the *want* of *fresh* meats, fruits, and vegetables, to which, in the Arctic regions, are superadded the powerful auxiliaries of damp quarters, exposure, the depressing effect of the long-continued polar night, and, in badly conducted expeditions, poor ventilation, uncleanliness, illy cooked food, and lack of sufficient exercise for both body and mind; but none of these auxiliaries, or their combinations, are sufficient within themselves to determine this disease until the vital forces have been lowered by protracted abstinence from *fresh* foods. An ounce of prevention is *not* worth a pound of cure, and in order that a fresh diet should be a perfect prophylactic it is necessary that it should enter somewhere near the proportion it does in home consumption. It must always be borne in mind that fresh food is not a *medicine* to counteract certain pathological conditions; it is an essential vital nourishment, given to combat a systemic debility, whose visible manifestations are called scurvy. The régime, therefore, to be successful, can never be homœopathic. It is the fact that this parsimony of proper food has often been combined with the other depressing influences noticed above, and has led many to give undue value to the latter in the etiology of the complaint, and to produce such a wide and discordant range of opinions on its causation even by those who have met it face to face.

Sir John Ross thought that it was produced by the want of fresh bread, yet my party was without fresh bread for two years, and nearly a year without bread of any kind, which was certainly fair enough test to exclude it from any of the essential causes; still the use of fresh bread as an auxiliary prophylactic can not be too strongly dwelt upon, and no expedition is complete within the powers of man to make it so whose culinary department cannot furnish fresh bread to the exclusion of all other, especially during those long, weary nights when the disease is most likely to make its invasion. The flour employed upon an Arctic expedition should be recently ground from the very latest crop of wheat or other cereals employed, and be preserved in hermetically sealed tin cases. Sir John believed that his second expedition showed that vegetable nourishment alone was not competent to make headway against it, whereas he only proved that prepared vegetables were so; and when we reflect that from 1829 to 1833 vegetables and fruits were illy prepared compared with the present methods, which are still not invincible, his scurvy can easily be accounted for, especially when we find that an addition of fresh fish or recently killed seals to the ordinary diet of the ship's stores was an effective preservative to the health of the crews.

One of the greatest obstacles to be encountered in the employment of fresh animal food in the polar zones is the antipathy with which such a diet of fish-eating animals is received by the consumers. The flesh of the reindeer is at once acceptable, and that of the musk-ox reasonably so, but the walrus, polar bear, and different varieties of seals have peculiar flavors, which, with some people, it is almost impossible to overcome. The most tenacious epicures are to be found in the forecastle. The educated officer, whose mess table in the past may have been a perfectly animated market report, can, with an honorable incentive ahead of him, more readily relinquish his varied bill of fare than can the foremast hand with his "hard-tack," "salt junk," and bitter coffee to which he is so firmly wedded. There was no necessity for the scurvy on board of Parry's ships when wintering at Igloolik, as that place is notoriously abundant with seal, walrus, polar bear, and fish at all times, and with reindeer and musk-oxen in the summer; and I am not only inclined to second the idea of American whaling masters, that those persons who will take this disease before they will eat bear, seal, or walrus are not only the least useful men of the ship's crews, but to go a step farther, and to say that for an Arctic exploring expedition, where the stomach is called upon to bear its share of the uncomfortable changes and hardships, they are simply worthless. A cook who has had some experience in converting these objectionable meats into more or less palatable dishes should form a part of the help in the culinary department.

Sir Edward Parry believed that the principal cause was in the clammy moisture of the ship's quarters, and especially, when the crew were compelled to sleep in damp bedding, yet I found no dampness whatever in most of the whaleships suffering with the disease, and the innumerable cases where large parties of men have been long subjected to this inconvenience without incurring it, makes it a mooted question whether such value can be attributed to it as has been done by such eminent authority as Sir Edward Parry. The dampness in Arctic ships is undoubtedly a powerful ally to the principal cause, and may, no doubt, readily determine the disease when the latter has, so to speak, established the scorbutic diathesis in the system, or seriously compromise its cure. If the winter-quarters of the vessel be near the abodes or within reach of the visits of Esquimaux, these adepts in snow architecture can easily "house" the ship so perfectly that dampness may be reduced to an insignificant minimum. Where it is not expected they will be encountered, persons familiar with their methods should form part of the crew, as Arctic whalemen, etc. During Sir Edward Parry's wintering at Melville Island he found freshly gathered sorrel an effective remedy, despite the dampness of his ships; but this plant, unfortunately, is not to be found in all Arctic localities, and most expeditions to these parts, being compelled to prosecute their labors on shipboard during the short summer months, have but little chance to gather the few simple herbs that are then in the prime of their short existence.

Captain McClure's expedition, which spent its third winter in Bay of Mercy, Banks' Land, and which, despite the fact that all hands were fed on fresh (?) meat three times a week, suffered somewhat from the malady, is often cited as an instance (and I believe is the only Arctic instance) to illustrate the fact that such a diet is not in itself adequate to stay the progress of the complaint. But if we take all the game secured by that expedition and mathematically divide or distribute it among the large crew during their three years' Arctic sojourn, the amount becomes so very small that one is forced to admire Sir Robert McClure more for his admirable good sense, tact, and judgment in conducting his crew so safely through under such discouraging circumstances, than for the conclusions he reached in dealing with the few cases he encountered. It should also be remembered that the reindeer, his main supply of fresh food, migrates southward from Banks' Land as early as the latter part of September, and cross Dease's Strait to the North American mainland as soon as that channel freezes over in early October, and remain absent until May or June. His winter's supply of reindeer meat could, therefore, hardly be called fresh, for even if preserved by freezing, it will lose much of its value. Payer, of the Austro-Hungarian expedition, an equally careful observer, has said, "We spent the latter half of August in seal-hunting, for it was only by the use of fresh meat that we were able to contend with, if not prevent, cases of scurvy." I shall again refer to the meat diet question under another head.

There is also a prevailing idea that the constitution of a white man steadily deteriorates in this enervating climate, and each recurring winter finds him less able to combat the scurvy and other Arctic debilitating diseases, until it is a mere matter of time when the strongest and healthiest of them must succumb. This is true just so far as drafts of vitality are made upon the healthy organism to support it, instead of doing so by proper fresh food, and this evil, like any other, can become accumulative until it will undermine, in a definite period of time, even the hardiest constitutions. I do not hesitate to state that, with an ample supply of fresh palatable food, the Arctic regions are the healthiest of all zones to these white men who are of sufficient health, strength, and endurance to be enlisted for a polar expedition, and this for an indefinite period of time. This statement is conclusively proven by many typical cases.

Among the earlier navigators, provided with only the coarsest salt provisions and no method of transporting fresh food, it was found impossible to go into polar winter quarters without the direst results, and expeditions were only fitted for a summer's cruise. The many unfortunate terminations to these winter experiments were then universally attributed to the salt provisions with which they were provided, a theory which is yet zealously maintained by some. Salted provisions are deleterious in direct ratio to the amount of fresh food they displace and for which they are unfortunately often substituted, it being nearly always animal food which is thus prepared. Other than this, salted provisions have no influence in the clinical history of the disease. I believe, indeed, that the salted mess pork of the whale-ships is equal, if not superior, to the prepared pemmican of Arctic explorers as an Arctic diet, especially if the latter be lacking in fat. Both are worthless if not freely supplemented with the meats obtained in the Polar regions, and the latter is anything but an effective antiscorbutic. The Russian army at the siege of Azof suffered from scurvy, and yet they had no salt provisions, in fact, they suffered no less severely from a want of this very essential condiment, even attributing the former to a lack of the latter. It sounds strangely incongruous with this theory that eminent practitioners of both continents have often recommended saline medication, especially the salts of potassa, to counteract a deficiency of these constituents from their normal proportions in health, a well-known pathological character in this disease. Dr. Flint, one of the best American authorities says, "that the antiscorbutic virtue of certain vegetables and fruits depends, to a greater or less extent, on the presence of the salts of potassa is altogether probable. Evidence of this is afforded by the fact that the isolated potash salts are useful in preventing the disease." The closely allied chemical and medicinal properties of potassium and sodium and their derived salts makes it highly improbable that the former can have such virtues and the latter such vices in the same pathological conditions. But we have already noticed that Sir John Ross has said (and he is amply corroborated) that a vegetable diet (*i.e.*, Ross's prepared vegetables) is not sufficient to hold the disease in check, and it is not probable that the process of preparation has robbed them of their chemical salts. The true virtues of vegetables are to be found in the freshness of their condition, and the efficacy of saline medication is well shown in the simple laws of assimilation. As the system is lowered the stomach and assimilative powers first reject the most indigestible or the inorganic elements of nutrition. The consequent lack of necessary salts produces the desire for saline foods, as salted provisions, etc., a well-established character of this complaint; but unassimilated, they fail in their object and pass through unchanged with the excreta, until the proper tone of the digestive organs has been raised by a plentiful supply of recently gathered food. The benefits to be derived from the proper use of the often-abused salt provisions under the latter circumstances are obvious.

From all these conflicting theories the only harmonious outlet is my previous statement, that it is in some unknown *vital* principle that the antiscorbutic properties of all vegetables reside, a statement which is further supported by the fact that raw and unripe potatoes, cabbage, fruits, and green corn, apples, etc., *i.e.*, when they are at their very maximum of vitality, are known to be more efficacious either as prophylactic or curative agents than at any other time, although at this time they are far less digestible than when ripe.

And this is no less true in the animal class of food. It is often recommended to drink the warm blood of a freshly slaughtered animal, a popular remedy among Arctic whalemen; and no doubt the flesh of it, if partaken of at the same time—a mode I have known to be used myself in one case with surprising effect—would be equally efficacious. Raw meat is assuredly superior to that which has been cooked, and in which it is not unreasonable to infer much of its peculiar vitality has been lost. Of the same kind of animals, the younger and more vigorous are the best, and of different species, those of a more active nature, indicative of greater vitality, are to be preferred. Some Arctic whaling masters believe, and not without reason, that seal and walrus are preferable to reindeer, although the latter is more acceptable to the palate; but the reason of this is be-

cause the former animals are nearly always killed right at the winter harbor of the ships by hired native hunters, while the reindeer furnished them are generally saddles of those slain in the autumn, during or before their southward migrations, and kept quite a period before being used. Such meats are generally sufficient to prevent the scurvy if amply provided, but if the disease has appeared they are slower in their curative powers than that freshly slain. These facts make McClure's situation, already noticed, more intelligible. The assumption advanced by some, that a too restricted diet of fresh meat has developed the scurvy, receives such a negation from the Esquimaux—who are not only essentially carnivorous, but eat their meat mostly in a raw state, and often warm from the freshly slaughtered animal—as to completely settle such a point, and only shows how carelessly causes can be diagnosed by some observers. Fresh, pure air as a causation of consumption is not more absurd. There was more reason displayed in Sir Gilbert Blaine's ideas, that the disease is contagious, which are now only brought forth to be properly ridiculed, inasmuch as it has one property of contagion, slim as it is, and that is the fact of almost simultaneous appearance in a community. Should the Esquimaux, however, be considered so low in the Darwinian scale as to make dietetic analogies unsafe, I might add, that my party of four white men lived on nothing but fresh meat, often raw, for a period of nine months, and were surrounded by all the known auxiliary scorbutic causes besides, and could have only escaped it, in my opinion, by this very diet. I should not have spent even these few words upon this part of the subject, had not this statement, presumably copied from elsewhere, been found under the pen of such authority as Dr. Flint, of New York City. That scorbutic dysentery, a channel that scurvy is prone to follow in warm climates, may be aggravated by the too rapid ingestion of very fresh meat, superadding the *enteric lesions* generally due to such a diet in tropical lands, to a greater extent than the value obtained as an antiscorbutic, is obvious, and this fact would at once indicate the proper treatment under such circumstances. Such was the case in Lord Anson's famous voyage, when, with a crew suffering from scorbutic dysentery, on the West Coast of Mexico, a palliative treatment by very fresh meat, suddenly assumed, only aggravated the enteric malady with unfavorable results.

Scurvy slowly depresses the whole vital powers of man, until at last the ultimate *strain* has been reached in the weakest organ, when it seems to concentrate its powers at this point or points, and owing to the diversity of constitutions, climate, and other causes, this gives a variety to its clinical history which covers almost all the known *ailments* of mankind. It is plainly beyond the scope of this article to designate the various forms it may assume due to these causes. It is often allied with other diseases, which may have been determined by the scorbutic ailment or not, oftener, no doubt, than is generally supposed, but since this is more likely to deceive the practitioner in the torrid or temperate zones than one equally skilful in the Arctic, who is more on the lookout for its invasion, it does not concern us here. A few centuries ago scurvy raged endemically during the winter in cold climates, until civilization furnished better means of preserving vegetables and fresh meats. Then a winter's supply of meat was killed in the autumn and variously prepared, and vegetables at that season were unknown. Now animals are slaughtered to meet the immediate demand, and a plentiful supply of vegetables are carefully housed, or even raised in hot-beds, or imported fresh from neighboring climes, and, as a consequence, scurvy has disappeared in civilized and populated districts, unless war, pestilence, or other great causes unsettle the regular course of events.

The only real antiscorbutic remedies which I am disposed to acknowledge are *fresh* foods, and by fresh food I mean *anything* recently deprived of life, or having the powers of preservation of the living principle to an eminent degree, and when I say anything I mean every living organism not actually poisonous, even including such as leaves, *weeds*, *insects*, and reptiles. The first voyagers to Canada prevented and cured the disease by eating the fresh foliage of the spruce pine (*Abies Canadensis*). Captain Cook fared likewise in partaking of the fresh leaves of an evergreen tree in New Zealand; the sorrel of Parry has already been alluded to; and the scurvy-grass of the Arctic, a rough, tasteless, cruciferous plant of that region is famous for the good it has done. Lord Anson gave a most practical illustration to this theory when he directed a small boat to land on the Island of Juan Fernandez, and procure anything whatever so that it was green. A boat load of weeds was the result, but they did their desired work so well that their efficiency as antiscorbutics is beyond cavil.

Any process which will destroy vitality itself, as boiling, burning, violent chemical action, etc., will, if used in the process of preserving food, do much to destroy its efficiency as an antiscorbutic, therefore we find the most efficient fruits and vegetables to be those simply dried by atmospheric exposure. Dr. J. H. Wilson, of the U. S. Navy, in "Naval Hygiene," says: "It seems to us that various fruits and vegetables, and even flesh, lose less of the peculiar properties which belong to each of them as fresh food by simple desiccation than by any other process of preservation yet imagined, not even excepting the use of air-tight cans." Those juices obtained by simple expression, as lime, lemon, and orange juice, carefully bottled from the fresh fruits; of meats, those dried in the sun and preserved in their own tallow, as the pemmican of the prairie Indian, which bears no more relation to the pemmican prepared for Arctic voyagers by contract, than their scalping does to a shampoo—all of these are known to be better than fruits or vegetables prepared by boiling, or better than chemically prepared tartaric, malic, citric, acetic, or other vegetable acids derived therefrom, or meats that have been boiled and canned, or salted and smoked, although, so far as chemistry can determine, their essential ingredients remain unchanged.

Freezing completely "kills" the antiscorbutic property of lime, lemon, and other fresh juices, and they lose much of their value by age. Fruits and vegetables whose strong vitality is not destroyed by the preservative properties of weak acids are very good, in fact, in direct ratio to the amount of freshness thus preserved, as green cucumbers, onions, etc., in vinegar prepared from fresh fruits. Cranberries, despite their high price, must enter more largely into Arctic foods hereafter from their splendid property of long preservation in the weakest of all known acids, pure water. Their strong vitality, thus indicated, would show them to be good if properly dried, if that step ever comes to pass.

Those articles of food which consist of the seeds of plants are valuable, as beans, peas, wheat, corn, etc., taken whole, as the preliminary soaking which is almost always necessary, if properly conducted, produces a germination, a true vegetable growth, which almost classifies them as freshly grown. This property of sprouting is partially lost with age, although wheat taken from the mummies of Egypt, and older than decipherable history, will germinate if placed under favorable circumstances.

Vinegar, so variously lauded and condemned, is valuable if prepared from fresh fruits, as cider vinegar, etc., but prepared from malt or liquors, or worse than all, prepared chemically, it is more or less worthless.

Molasses has also various qualities dependent upon the amount of vitality of the cane that is destroyed in its preparation, as will be readily inferred from the following extract from Surgeon Wilson, U. S. N.: "The best is a syrup made by merely evaporating the juice of the cane to a proper consistence; the next best is the first drainage from the crystallization of brown sugar; the worst in this respect is sugar-house syrup, however excellent it may be in other respects."

As scurvy is assumed by us to be the product of a want of food containing its necessary alimentary stimulus of vitality, the most natural conclusion would be that this disease would be sooner developed in those who had already made excessive drains upon their vital powers, as by long-continued debaucheries, injurious medication, excessive venery, chronic maladies, and other debilitating causes, a conclusion which we find thoroughly supported by unfortunate facts. The expression *vitality*, which has been so often used, while, according to some, not scientifically exact, is yet sufficiently descriptive to the intelligent reader to convey the impression desired.

Condensing this whole article into a nutshell, scurvy has but one prime essential causation, and but one specific cure, the want on one hand and ample supply on the other of fresh vitalizing nourishment, and any considerable deviation from these simple facts will lead one into an intricacy of clinical histories, pathological characteristics, irrelevant diagnostics, and, worse than all, empirical therapeutics, that can only be encompassed by the medical libraries of the world.

THE AMERICAN STUDENT IN LONDON.—Is it a slander? *The Medical News*, an infant weekly of London, publishes the following: "I have frequently been a listener during the time that discussions have taken place at a certain large hospital in London on the subject of American students of medicine. At the particular hospital in question, the 'Yank' is a recognized institution even now, but formerly it was a difficult matter for any Britisher to get within hearing distance of the principal members of the staff during their visits to the wards. Jonathan's representatives entirely shoved aside all who endeavored to see or hear, and having carefully surrounded the beds and the demonstrator to the exclusion of regular students of the hospital, the lecturer would proceed, to the edification and, let us hope, instruction, of the untutored Westerns. Experiences of this kind have tended rather to exaggerate our notions of the offensive character of the American."

CASE OF CYSTIC TUMOR OF LIVER CAUSED BY IMPACTED GALL-STONE IN COMMON BILE-DUCT.

REPORTED BY ALFRED NORTH, M.D.,

WATERBURY, CONN.

J. H. D——, aged forty-five, merchant, first came under observation in July, 1881. For the seven years previous has enjoyed fair general health, this condition being only interrupted by seven or eight "bilious attacks," as he termed them.

The symptoms at these times were pain and tenderness over the right lobe of the liver, slight rise in temperature, some acceleration of the pulse, with vomiting and jaundice. These attacks were treated and relieved by hypodermics of morphia and dry cupping, followed by diaphoretics. Their frequency was seemingly increased by exposure to cold and over-exertion, and diminished by the prolonged use of small doses of hydrarg. bichloride.

In 1878, fearing an incurable disease of the liver, the exact nature of which could not be determined, he, by advice, consulted Dr. James R. Leaming, who, unable to find sufficient evidence of any organic disease, was compelled to regard it as a functional disorder of the liver. In accordance with his advice, the use of the hydrarg. bichloride, in gr. $\frac{1}{12}$ doses, was continued with some apparent benefit for the space of two years.

On July 8, 1881, occurred another attack, which proved to be his last illness. For some ten days previous nausea was present, with general malaise, previous paroxysms having occurred with few or no premonitory symptoms. The disease proper ushered in by a slight chill, followed by vomiting and pain, this latter being not as usual in the right, but in the left hypochondrium, chest, and shoulder. The treatment mentioned as adopted on other seemingly similar occasions was repeated now, but without affording the usual relief.

July 12th.—Has had a bad night, with little sleep, notwithstanding an injection of morphia at a late hour. The pain is still very intense and spasmodic in character, aggravated by motion, and relieved only by very hot fomentation. Vomiting occurs with little effort, and with great temporary relief to the gastric oppression. Jaundice general, and well marked; stools clay-colored; urine contains no albumen; temperature, 100°; pulse, 104.

July 25th.—Condition not materially changed since last note, except that there is great loss of flesh and strength, patient being unable to turn in bed without assistance; jaundice more extreme; vomiting not quite so frequent; has at times some appetite and retains food forty-eight hours or more; still requires morphia, both for the pain, which is still liable to great exacerbations on change of posture and for the relief of the sense of complete exhaustion which oppresses him. Urine, passed to the amount of a pint and a half daily—deeply bile-stained, containing numerous hyaline and granular casts, but no albumen; abdomen at times quite tympanitic, at others nearly normal; bowels only act in response to enemas or cathartics.

Case again examined by Dr. Leaming, who, after a thorough exploration at two visits, now considers it to be cancer of the liver, complicated with subacute enteritis. Physical examination of chest and abdomen reveal no lesion of any other organ.

September 5th.—For past four weeks little change has been experienced, but that for the better. Du-

ring one week the jaundice almost entirely cleared up, but soon reappeared. General emaciation has slowly progressed, although the nausea and vomiting have for some time been nearly absent, and food has been taken with appetite and relish. Bowels have been easily regulated by the free use of fruit. Is able to sit up a little in bed, and begins to be confident of recovery. Skin still has the waxy, jaundiced look, suggestive of cancer of the liver. A fulness has been noticed over the stomach for the past few days which has now increased so as to cause a perceptible bulging of the four left lower ribs. Percussion over it gives dulness, and palpation shows fluctuation—painless on pressure, but a sense of prostration and faintness caused by much manipulation. There is evidently a cystic tumor present, probably of the liver, which, considering his present improved condition, it is thought best to simply watch without active interference.

September 8th.—Was called to see patient in the night. The pain had suddenly returned with greater severity than at any previous time. Pulse 120, and very feeble. Countenance haggard and anxious. Tumor has rapidly grown during last three days, and is now especially prominent in epigastrium.

5 P.M.—Patient has rapidly failed during the day. Pulse, 130, weak and irregular. To remove the pressure of the tumor it was now decided to aspirate. It is accordingly done at a point three inches below the sternum, and five pints of coffee-colored fluid are drawn off, the operation giving great relief to the patient.

September 10th.—Patient was much better yesterday in all respects, but passed a wakeful, restless night. Mind has been wandering, and pulse very feeble. Has passed scarce any urine since operation, and a catheter introduced finds the bladder empty. Patient rapidly failed during the afternoon, and died at 7 P.M.

Autopsy, twelve hours after death.—Rigor mortis well marked, body much emaciated and highly jaundiced.

Abdominal cavity: Contents stained a deep bronze by the bile, especially the omentum and peritoneum. Intestines in many places adherent to each other and to the omentum, but with this exception and their color, normal. Contained small amount of fæces rather more highly colored than normal in upper part. Stomach slightly distended with gas, contained twelve ounces milk. No evidence of disease. Spleen, on section rather too pale, otherwise normal. Kidneys: left, normal to all gross appearances; right, congested, small cysts, size large pin-head and several in number. No apparent parenchymatous changes. Bladder contained one ounce turbid urine, normal. Liver, about normal in size, but pushed to the right side, the left lobe reaching barely to the median line, by a large cyst. This cyst was situated immediately below the diaphragm, to which it was adherent, adhesions also to the posterior aspect of stomach and upper extremity of spleen. These were easily separated, but there existed with it and the left lobe of the liver so strong an attachment that it could not be separated except by tearing the sac. The cyst was simple unilocular, size about that of a man's head, and walls about twice the thickness of the normal stomach. Contained about a pint of fluid like that withdrawn before death. Its inner surfaces resembled a granular mucous membrane, being rough and studded with numerous small fleshy points or granulations.

The point of origin of the tumor was determined with difficulty. It was unpedunculated, but the strong and intimate connection with the liver, the nature of its walls and its contents, gave that organ as its origin.

Fluid removed was of specific gravity of 1015, contained albumen in large amounts, bile in considerable quantity, together with bile salts and biliary coloring matter. Examined closely for echinococci with negative result.

The liver itself was in a state of moderate fatty degeneration.

The gall-bladder contained little bile, but a calculus an inch in length and half an inch in diameter, which was freely movable.

Impacted in the ductus communis choledochus, about an inch from its outlet, was another calculus about the size of a common marble. This could be moved easily backward, but was effectually prevented from advancing by the smaller lumen of the duct beyond.

Heart normal.

Lungs normal except a slight pleuritic adhesion at left apex.

Remarks.—This case seems to me to present several points of interest. The immediate cause of death appeared to be the exhaustion succeeding the operation, together with the suppression of urine. The remote cause, the impaction of the calculus, causing retention of the bile, interference with the liver function and consequent inanition, as well as giving rise to the cyst already described.

Cysts of the liver seem of rare occurrence and are not readily recognized, resembling in these particulars cysts of the pancreas, with which they are readily confounded. Barlach and Atlee have each reported one case; in both there was a communication with the common duct, and in Barlach's also a communication with the stomach, bile and food being found in the cyst.

The history of our present case would go to confirm the statement of Nothnagel, that in jaundice of much intensity and duration, no matter what the cause, casts appear in the urine, sometimes without albumen.

Previous to his last illness the patient's urine had been repeatedly examined and neither albumen nor casts found. The post-mortem showed no evidence of organic renal disease, yet subsequent examinations by Drs. Welch, Heitzman, and Buck, of New York, all showed abundance of casts, with little or no albumen. Dr. Welch has subsequently confirmed Nothnagel's statement, though he reports never to have before seen casts in such large numbers in any case of jaundice without Bright's disease.

I know of no cause for the sudden suppression of urine after the tapping; previously, during the course of his illness, there had been a good average daily amount excreted. It is probable that the calculus had been lodged in the duct for a long time without at all times completely obstructing it, as for the past four years there had been frequent attacks of jaundice without the severe pain which characterized former attacks, and which would be likely to follow the fresh introduction of a calculus into the duct.

THE SULTAN OF TURKEY has given a site in Jerusalem for the purpose of erecting a hospice and ophthalmic dispensary under the auspices of the English branch of the Order of St. John.

A DERMOID ENCYSTED TUMOR OF THE EYELID.

By HENRY G. CORNWELL, M.D.,

CLINICAL LECTURER ON OPHTHALMOLOGY AND OTOLOGY, STARLING MEDICAL COLLEGE, ETC., COLUMBUS, OHIO.

Dermoid encysted tumors of the eyelids are very rarely observed. The following case came under my observation during the present year.

T. M——, aged three years; parents English, residing in Columbus, was brought to me at the Eye and Ear Dispensary of Starling Medical College, June 23, 1882, by the family physician, Dr. C. F. Turney. The tumor exhibited itself as a slight swelling at birth, which gradually enlarged with the growth of the child. On examination at the dispensary it was observed to be about the size of a hazel-nut, and of firm doughy consistency so that an indentation made with the finger remained as though the tumor was formed of stiff putty. An incision over its convexity gave exit to a thick material, which came out on pressure in the form of a long cylindrical mass creamy-white in color, having fine longitudinal dark stripes, which on careful examination proved to be long hairs. The sac-wall was excised, and the wound closed with a couple of stitches, a small opening being left for drainage. Dr. Bleile examined the contents of the sac, and found it to be made up of epithelial cells, whole and disintegrated, fat, and a large quantity of hair.

The orbit and its environments seem to be a favorite situation for the development of encysted tumors. They are of varying character and origin, and on this account are interesting subjects of study.

There are two rare varieties of cysts of the integument of the lids, viz.: (1) The retention of sebaceous cysts, due to the obstruction of the orifice of one of the ducts of a sebaceous gland, and (2) dermoid cysts. The first variety is observed most frequently on the upper lid, near its outer angle, just below the point where the brow cysts are oftenest observed. They attain sometimes the size of a chestnut. On account of the fewer sebaceous glands in the lower lid, it is the seat of such formations in extremely rare cases. Occasionally there is observed very small cysts, having thin fluid contents of the retention variety at the margin of the lid. They may be sebaceous, the contents of the sac having undergone serous metamorphosis, or more probably they are formed from an obstruction of one of the sweat-glands in this locality, which, according to Moll and Stieda, here give up their coil-like form and become wide canals opening into the excretory duct of the hair follicle. The second and rarer variety, the dermoid, is observed most frequently at the upper and outer angle of the orbit, where the integument of the lid joins that of the brow. These congenital cysts of the eye are observed in the order of their frequency (1) over the brow at the external angle of the orbit, (2) on the lid, (3) in the orbit.[1]

In some instances these tumors contain almost clear fluid fat.[2] It is pretty generally believed that they are formed by an invagination or involution of a portion of the external blastodermic membrane during fetal development.

181 East State Street, Columbus, O.

[1] *Vide* A Case of Dermoid Encysted Tumor of the Orbit, by Henry G. Cornwell, M.D., etc., October number Archives of Ophth., N. Y., 1882.

[2] Dermous: Kyste hulleux du sourcil, Soc. de Chir. à Paris, Jan. 21, 1880.

Reports of Hospitals.

NORTHEASTERN HOSPITAL FOR CHILDREN, LONDON, ENG.

Service of Mr. RICKMAN J. GODLEE, M.S.

Case I.—*Acute suppuration of right elbow-joint—Cure.*—Esther W——, aged eighteen months, attended first as an out-patient in February last.

The mother stated that she had two other children living and healthy; no deaths; suffered from cough; had had three miscarriages; no phthisis in family; father healthy.

The present child was healthy from birth up to the end of November last, when she had varicella, and was ill eight weeks. A few sores remained on the head, but she continued in fair health, though weak, till January 29th, when the mother noticed a slight swelling in front of the right elbow, and the child cried whenever she was moved or touched. She brought the child to the hospital the same evening, when splints were applied by the house-surgeon and the mother told to attend again the next day.

When first seen in the out-patient department, the elbow presented a diffuse œdematous and tender swelling in front and behind. There was an obscure sense of fluctuation on the outer side of the olecranon. No history of injury could be elicited. The child had had a slight cough two weeks; no diarrhœa; was fed on milk and broth. As an application, equal parts of ext. belladonnæ and glycerine were ordered without any marked effect. Poulticed. Œdema less by following day and the elbow seemed better. On the day after, however, fluctuation became very evident, and the child was admitted (February 4, 1882). Temperature taken and found to be 99.6°. An anæsthetic was administered and the abscess opened (under the spray) by two incisions, on the inner and outer sides of olecranon respectively. About half an ounce of pus escaped. The opening on the inner side led to a large cavity at the back of the humerus; bone bare but not rough. That on the outer side formed a free communication with the interior of the joint. Cartilages of joint completely bare but not felt to be crowded. No bare bone felt. Two drainage-tubes were inserted and the wound dressed antiseptically. The elbow was fixed by bandaging the limb to the side of the body, the lint being drawn well up to the opposite shoulder; no splint applied. Temperature in evening 97.6°.

February 5th.—Dressed. Temperature, morning, 98°; evening, 97.4°. Urine black (from carbolic acid).

February 7th.—Dressed. Temperature, 97°. Child sweating profusely.

January 10th.—Dressed again. Temperature continues sub-normal; very little discharge; very little swelling about joint. Ordered mist. ol. morrhuæ and vin. ferri ℥ss ʒj. Takes food well; bread, milk, and beef-tea.

February 13th.—Dressed. Temperature, 97.2° and 98°. One inch of drainage-tube in sinus on outer side of olecranon; two inches in that on inner side. No splint applied, but elbow kept at a right angle and bandaged to chest, a flannel bandage being employed and cotton wool placed in axilla and over front of chest.

February 14th.—Both wounds look healthy; drainage-tube left out of outer opening.

February 18th.—Dressed. Wounds healthy and no doubt still aseptic, though the discharge is not altogether free from smell. Tube in inner opening shortened.

February 21st.—Outer opening healed.

February 28th.—Tube removed from inner opening.

March 3d.—Temperature has been subnormal till this evening when it rose to 99.2°.

March 4th.—Temperature again subnormal. Boracic lint dressing substituted for antiseptic gauze. Passive motion every morning.

March 6th.—Temperature rose to 99.6° in evening. This and the evening of March 3d were the only occasions during the patient's stay in the hospital on which the temperature rose above 98.6° and during the greater part of the time the temperature was subnormal.

March 10th.—Wound (inner) quite healed.

March 18th.—Discharged to-day. Extension fairly good; complete extension not permitted, pronation and supernation perfect.

[*Remarks by Mr. Godlee.*—"The appearance of the case at first was very much that of one of acute periostitis; but the fact that on opening the abscess no bare bone was felt, whereas the joint was certainly open, and that no sequestrum separated, make it clear that it was really a case of acute suppuration of the joint. The position in which the limb was kept (the same that is recommended by Dr. Thomas, of Liverpool) gave very satisfactory results both in acute and chronic disease of the elbow. If the child be out of bed, the arm is kept, of course, inside the clothes. It is doubtful if any splint has been devised which keeps the limb at such perfect rest."]

Case II.—*Scalded throat—Tracheotomy—Measles—Death.*—Edward B——, aged three months, was scalded about 5 P.M. on January 28, 1882, through sucking the spout of a kettle. He was brought to the hospital and admitted about 10 P.M. On inspection the fauces were seen to be red and clogged with mucus. Laryngeal stridor marked, slight falling in of lower ribs during inspiration. The breathing gradually became worse and the sinking in of the ribs very marked. At 2 A.M. (29th) tracheotomy was performed by the house-surgeon and a bivalve tube inserted. Breathing relieved, but became bad again on introducing inner tube, so this was left out pro. tem.

January 29th.—Air enters freely, but worse on introducing inner tube, so it is not left in. Much discharge of mucus at first and blood, but not now. Child flushed, sleeps heavily; pulse full and strong; temperature, morning, 101.2°; evening, 102.8°; pulse, morning, 176, evening 168; respiration, morning, 56; evening, 60. Takes milk well.

January 30th.—Sick twice during night. Restless during night and slept little. Motions loose; cough very frequent; only mucus, no blood. Able to swallow well and took a pint of milk yesterday without difficulty. This morning at 4 A.M. the breathing began to get much worse and is now (10 A.M.) very quick, but regular; no stridor. Pulse regular, 144; Temperature keeps at 102.8°; respiration, 64. Slight retraction of epigastrium. Restless, occasionally rolling from side to side. Alæ nasi do not dilate in inspiration. Abundant râles over chest; no fine crepitation. At 11.45 the tube replaced by another, larger, and with an inner tube. Profuse discharge of muco-pus through opening and tube. Inner tube can now easily be borne.

January 31st.—Sick once last evening, not since. Has taken one and one-half pint of milk since last night and slept well. Poultices to chest last night; cough very frequent; abundant discharge of very fetid muco-pus through tube; a streak of blood. Tube removed every half hour all day yesterday.

Pulse good, 132; occasionally intermits; expression anxious, but aspect less blue. Respiration, 50, regular. Temperature, 101° throughout the day. On removing the tube this morning child was quite unable to breathe through larynx, which became apparently immediately choked with mucus. Poultices continued to chest; lips very blue; profuse perspiration and urgent dyspnœa. On auscultation râles and rhonchi over both sides of chest. All over left back breathing somewhat tubular in character, especially at the apex, where there is abundant fine crepitation. Brandy (3 ss. every four hours) ordered. Carbolic acid in steamed kettle. Stronger toward evening.

February 1st.—Slept well and is better this morning; breathing quiet; no lividity; bowels not open; cough the same; still abundant discharge of mucus through tube. Pulse, 144; respiration, 52; temperature, morning, 102°; evening, 101°. Takes plenty of nourishment. To discontinue brandy.

Tube removed at 11.30, when child soon became livid and blue with great dyspnœa and cold sweating. A bivalve canula introduced. Prostrate and rather collapsed.

Discharge abundant and fetid.

February 2d.—Slept well. Breathing quiet and regular. Bowels acted twice in night. Temperature, morning, 101.2°; evening, 102°; pulse, 148°. Takes about a pint and a half of milk during the night. Coughs a good deal after hand spray of carbolic acid, which is used through tube every four hours. Tongue cleaning at tip and edges, but covered elsewhere with thick white fur. Chest: Loud mucous râles and rhonchi abundant over both sides of chest. At left back dulness with tubular breathing over a small area just below angle of scapula. To stop brandy.

February 3d.—India-rubber tube introduced. Less discharge and this less fetid, but still streaked at times with blood. Slept well and looks better this morning. Takes milk well. Temperature, morning, 100.2°; evening, 101°.

February 4th.—Tube removed every two hours to-day. Does not seem so well. Temperature, 100°.

February 6th.—Appears to have less strength to cough up mucus. Very little through tube—at times streaked with blood. Morning temperature, 98.8°; evening, 100.4°.

February 8th.—Still profuse discharge through tube. India-rubber tube changed each morning. Takes nourishment well. Temperature, 98.8° and 100.2°.

February 10th.—Respiration rapid. Profuse discharge through tube, which gets clogged. Carbolic steam continued. Very little œdema of neck. Two or three pustules about face.

February 11th.—Sleeps well. Discharge more thick and this morning again offensive. Alæ nasi dilating.

February 13th.—Tongue thickly coated with large white fur. Takes nourishment well. This morning breathing quiet—appears a little improved. Poultices continued.

February 16th.—Improved. Cough very troublesome. India-rubber tube again inserted yesterday. Discharge through tube the same. Takes milk and beef-tea well. Ordered mist. ammon. et ipecac., ʒ j., every six hours. Temperature, normal.

February 20th.—On removing inner rubber tube and placing sponge over opening, not the slightest amount of air enters the larynx, and the child immediately struggles and face becomes blue. Discharge considerably less, not fetid. Tongue coated with moist fur in centre. Temperature, subnormal; pulse, 126°. Left base behind still dull, with tubular breathing. No dulness elsewhere, but râles and rhonchi all over chest.

February 21st.—To have some bread. Evening temperature fell to 97.6°.

February 23d.—Comfortable all night, but coughed more than usual. This morning breathing more short. Dull and heavy, and not inclined to sit up. Discharge more profuse from tube. Temperature, 103.6°, falling to 100.2° in evening.

February 27th.—Much better last three days. Sits up in bed. Respiration quiet. Still a good deal of discharge comes through tube. India-rubber tube changed every two hours.

February 28th.—Full diet.

March 11th (11 P.M.).—Breathing has become more rapid since morning. Did not take dinner during afternoon. During the afternoon there was much embarrassment as if trachea was blocked below tube. At present there is great dyspnœa and some rattling in tube, but the signs of obstruction are not so marked. Pulse fair, 132°. Perspiring freely. Discharge rather copious and thick. This afternoon poultice ordered and vin. ipecac., ɱ v., added to mist. ammon. c. ipecac. To have a drachm of brandy every four hours. No blood in discharge. Lungs: Air not entering freely. Rhonchi and sibilli very marked. Resonance somewhat generally diminished. Tube frequently cleaned out with feather. Temperature has been subnormal till to-day, when it rose in evening to 100°.

March 12th.—Restless in night. Dyspnœa very marked. Discharge more fluid—very abundant. Temperature, 99.8°, and evening, 101.8°.

March 13th.—Two spasmodic attacks of dyspnœa during night. Discharge through tube very abundant. Does not take nourishment except milk. Abundant râles over both lungs. No dulness. Air seems to enter freely but some sucking in of lower ribs.

March 21st.—Temperature has been gradually falling (with evening exacerbations) since 16th, and is now normal. Pulse, 132°.

April 1st.—Glycerine and perchloride of iron have been applied to larynx every morning since March 22d. Temperature subnormal.

April 19th.—Nitrate of silver applied to trachea through opening. Great distress when tube removed. Temperature still subnormal, but rose to 99° this evening.

April 20th.—Steam discontinued.

May 12th.—Transferred to Isolation Ward, as symptoms of measles have appeared. Temperature rose to 103.4°, and (with morning intermissions) reached 104.4° yesterday evening; pulse, 144. Eruption well marked.

May 16th.—Lately symptoms of increasing broncho-pneumonia in both lungs. Great dyspnœa. Evening temperature, 103°; pulse, 168; respiration, 60.

May 17th.—Temperature, 102.4°; pulse, 184; respiration, 72. Died to day. No post-mortem allowed.

[*Remarks by Mr. Godles.*—"Up till the last few days this case was merely an illustration of the numerous difficulties that are associated with these somewhat common cases of scald amongst the poorer classes. The child had made a satisfactory recovery from the immediate effects of the injury and then from a pretty severe attack of pneumonia; but at the end of four months there was scarcely any improvement in the character of the respirations when the tube was taken out. It cannot be doubted that considerable destruction of tissue and subsequent cicatrization in the larynx had taken place, and what the result would have been if the child had not died of the intermittent attack of measles can only be guessed. Probably attempts would have been necessary to pass bougies through the larynx, unless the child had been allowed to continue using the tube indefinitely."]

CASE III.—*Noma vulvæ—Death.*—Isabel D——, aged ten months, was admitted on May 10, 1882.

The ulceration began about fourteen days previously. A small patch first appeared between the labium and thigh, and spread. No blood or 'bits of flesh' came away. On admission, a deep ulceration was found between the thigh and left labium. Its surface was irregular, grayish yellow, sloughy, not very offensive. It extended about four inches along the fold ascending to the groin, and was surrounded by a thickened red border. Left labium dark and swollen. Right labium swollen and of a deep purplish color. The child had a pale anxious expression. There were patches of eczema on the face. Death occurred at 5.30 A.M. on the 3d. Post-mortem, seven hours after death. Body well nourished, but muscles flabby. No œdema of extremities. Left labium and groin a mass of unhealthy ulceration, the former infiltrated throughout its whole thickness, and the ulceration extending into the tissues of the groin. Right labium swollen, not ulcerated. Two considerable hemorrhagic infarcts of anterior border of upper and lower lobes of left lung; lungs otherwise healthy. Left ventricle of heart slightly contracted; right ventricle empty, not contracted. Liver and spleen normal. Kidneys somewhat contracted. Brain normal.

[*Remarks by Mr. Godles.*—"Cases of noma in this situation are not uncommon among the poor in the east end of London; often they are milder in character and under the administration of tonics and the application of iodoform end favorably. Two cases of a similar character about the external ear have been recently treated at this hospital, one of which, in a very marasmic child, ended fatally, the other recovered."]

VAGINAL HEMORRHAGE IN A NEW-BORN CHILD.—Dr. Josef Pollak, in Devecser, reports the following case in the *Wien. Med. Presse.* He observed in a female infant, four days old, a not inconsiderable hemorrhage from the vagina. The bleeding reappeared several times daily; after the third day the discharge assumed a reddish-brown, and later a chocolate color, and ceased totally when the infant was nine days old. At the same time there was noticed a swelling of the mammæ, and on pressure a milk-like fluid oozed from them, drop by drop. The general health of the case just reported did not apparently suffer at all in consequence of the bleeding.

Progress of Medical Science.

BIERMER ON CONTRACTED KIDNEY.—Professor Biermer (*Breslauer Ærztlich. Zeitsch.*, 1882, No. 1) points out that until 1853, when Dr. Wilks first showed that there existed a form of Bright's disease unattended by dropsy, the opinion of the German medical clinical teachers always held the contracted kidney to be the final stage of ordinary parenchymatous nephritis. That it may be occasionally seen in such cases is possible, although it is rare for patients to survive the effects of the processes which lead to its formation. Following Dr. Traube and Dr. George Johnson, Dr. Biermer insists, from a purely clinical point of view, upon the existence of a special form of renal inflammation, which may be properly described as genuine contraction of the kidney. The course and sequence of symptoms in such cases are too typical for them to be denied a special category. Beginning, without special cause, with polyuria and small quantities of albumen in urine of low specific gravity, a gradual but progressive wasting ensues, the complexion becomes sallow, the left ventricle of the heart becomes hypertrophied, the tension of the pulse becomes increased, dyspnœa follows, and disturbances of digestion or of vision take place, without a trace of dropsy having been observed. In the later stages, the evidences of uræmia are the chief symptoms, which may culminate in death.

It is hardly possible to believe that cases running such a course could have begun with parenchymatous nephritis; and hence, Dr. Biermer holds that the process from its commencement must have been a different one. He suggests that no special etiology can be associated with this form of disease. In none of his cases does he find any exciting cause except chills, and upon the importance of these he lays some stress.

Repeated chills and complaints of cold feet are common before the disease is recognizably established; and from this fact he is inclined to ascribe a good deal of the disease to exposure of the extremities in cold, underground dwellings, damp floors, etc., recognizing in the polyuria of the initial stages the agency of arterial congestion within the kidney, induced by these means. He points out, in passing, that the very occurrence of increased instead of diminished secretion of urine proves that the early affection of the kidney is not obstructive in its nature, *i.e.*, causes no narrowing of the lesser tubules.

In the later stages, three influences may be recognized as playing a part in the destructive processes in the walls of the vessels—the mechanical influence of the frequently increased tension within the vessel, the degenerative influence of frequent congestion, and the more subtle influence of impaired nutrition. To the second of these, viz., frequent congestion, one must look for the explanation of the occasional excess of albumen thrown off.

The form of contracted kidney described in association with atheroma of the arteries differs in many points from this genuine idiopathic nephritis atrophicans. In the atheromatous form, the symptoms of changes in the heart and arteries appear long before the albuminuria and the signs of renal contraction. In the genuine contracted kidney this order is exactly reversed. Histologically, also, there is a difference, the contracted kidney showing a marked overgrowth of connective tissue, the atheromatous form being simply atrophied, with certain epithelial changes.

Two other forms of contracted kidney may be recognized, viz., the contraction after parenchymatous nephritis, or the amyloid state, and the gouty kidney. The first of these, with or without amyloid change, is rarely seen. The gouty kidney, besides its diathetic origin, shows changes which are more purely atrophic, and often cystic or pyelitic. In its early stages, moreover, its symptoms are quite distinct, although less easily distinguished toward the close.

The course of a genuine contracted kidney is from the beginning insidious and chronic. The earlier stages have been already mentioned. The later stages may be divided into two periods—one, in which the concurrent hypertrophy of the heart maintains a sufficient compensation, and the other, in which it ceases to compensate properly, and in which the symptoms of uræmic poisoning are most prominent. Complications such as apoplexy, pneumonia, erysipelas, etc., are frequent; but, where none such occur, contraction may go on to an astounding extent.

Of the individual symptoms, the state of the urine is the most important. The proof of the presence of albumen in the urine is indispensable; but it must be remembered that the amount often varies greatly, and that it may sometimes be altogether absent for a short time. Bodily exercise and muscular effort favor the production of albuminuria, and Biermer has often produced it in suspected cases by these means. Microscopic examination generally shows a scarcity of solid elements, a few isolated hyaline cylinders, and at times, a little renal epithelium, but rarely any blood-corpuscles. The excessive secretion of urine is not accompanied by thirst.

The condition of the heart, of the arteries, and of the fundus oculi, are of decided importance in diagnosis; though neither of them, taken alone, is essential. A certain amount of hypertrophy of the left ventricle is almost always present, and high tension is maintained in the arteries, even, as some English observers have shown, during the diastole in extreme cases. Palpitation is frequently complained of. Retinal changes may or may not be present, and are very variable in their extent and severity. Disturbance of respiration is always present; dyspnœa is frequently the first subjective complaint. In the earlier stages, it is probably due to cardiac derangement, but later on the cause is generally uræmic. Occurring frequently in cases with pulmonary complications, its importance as diagnostic of renal disease may be overlooked. Cerebral symptoms are not usually present till the late uræmic stages. Early uræmic states may show themselves in headache, vomiting, etc.

Disturbance of digestion is sure to appear sooner or later. The general nutrition is always affected; indeed, it is never properly maintained in the presence of chronic renal disease. This fact serves to distinguish the organic renal mischief from the functional and innocuous albuminuria which has been described of late years. If any person have albuminuria for several months, and do not lose flesh, he certainly does not suffer from contracted kidney. Dropsy plays a negative part, and, if present to any extent, must be due to one of the other forms of chronic renal disease, and not to genuine contracted kidney.

Biermer closes his remarks with the statement that he knows of no effectual means of treatment for this disease. He speaks strongly as to the danger of checking the diuresis, and hence finds all astringents to be contra-indicated. Even tannin, which he would employ in parenchymatous nephritis, he objects to in this form of disease. Diuretics and tonics are to be used until the uræmic state is arrived at; and during that period only narcotics, as morphia and chloral, should be given, simply with a view to the temporary relief of the strugglings and sufferings of the patient.—*London Med. Record*, June 15, 1882.

Diphtheria of the Skin.—In a monograph with the above title, Dr. D. J. Viñetor Bellaserra sums up the subject in the following propositions: 1. Whether diphtheria attack the mucous membrane or the skin, it is essentially the same disease. 2. The different aspects which the local lesions present depend entirely on the tissues involved, and all the various manifestations are due to the same cause. 3. Diphtheria is transmissible by direct contact, and any part of the cutaneous surface deprived of its epidermis is susceptible to the poison. 4. It is generally believed that diphtheria depends upon the presence of minute organisms, but whether they are of animal or vegetable origin is not settled. 5. The cutaneous, false membrane may exist alone, and constitute the sole manifestation of the disease, but this is rare. 6. When the cutaneous manifestation has presented itself, general infection already exists. 7. Cutaneous diphtheria often assumes an excessively malignant form. 8. The cutaneous lesions are commonly followed by palatal or general paralysis. 9. Sudden death may occur from cardiac thrombosis. 10. The prognosis is grave. 11. Prophylaxis consists in perfect isolation in every case. 12. Blisters should never be employed in the treatment of any case of diphtheria. 13. In case of death all religious ceremonies in the presence of the body should be forbidden, and the corpse should be buried. 14. In the treatment of the local affection the cautery should be employed—sulphate of copper, nitrate of silver, the hot-iron, or the thermo-cautery.—*El Sentido Catilico en las Ciencias Médicas*, July 22, 1882.

Relative Stenosis of the Cardiac Orifices.—Dr. Richard Henkirch, in the *Berliner Klinische Wochenschrift* of June 12, 1882, advances a theoretical explanation of the transient heart-murmurs, so often heard, and for which no anatomical reason can be found. In a normal heart the size of the orifice multiplied by the velocity of the blood-current must equal the cubic contents of the heart cavity, otherwise, if the latter be greater, we have stenosis. Hitherto but one factor has been taken into account, viz.: the diameter of the orifice; but it is clear that if, with a normal exit, the capacity of the heart be increased, the former becomes relatively too small, and we have a relative stenosis. The auriculo-ventricular openings partake in the dilatation of the cavities—to such an extent, indeed, that the unchanged valves become too small and insufficiency results. But it is otherwise with the arterial orifices, which do not dilate as the ventricles enlarge, and hence become too small. As regards the third factor—the velocity of the blood-current—a certain relation exists between the capacity of the heart and the size of its orifices which permits of changes in the velocity of the current within certain limits. But when, through congenital defect or in consequence of pathological changes, the ventricle can barely empty itself, a slight increase in the velocity will produce a murmur. On the other hand, a pre-existing murmur may disappear upon retardation of the blood-current—witness, for instance, the disappearance of a systolic murmur after severe hemorrhage or in the death agony. We should make a distinction between organic and functional or clinical stenosis. Since excrescences and proliferations are so often found post-mortem, which gave rise to no murmurs during life, we cannot regard slight inflammatory exudations on the endocardium as a cause sufficient to account for all otherwise unexplained murmurs. In acute endocarditis, or during a high fever there may be a weakening of the muscular walls of the heart, and a consequent dilatation. Here the relation between the ventricle and its orifice is altered, and the latter becomes relatively stenosed. The sound produced is a faint blowing murmur, and since the left ventricle receives the greatest strain, it is the first to give way, and the murmur is heard loudest over the left heart. It is, of course, systolic, since it is caused by aortic stenosis. After copious hemorrhage loud, blowing, systolic murmurs often arise, sometimes several days after the occurrence. These cannot be produced by the irregular working of the valves, owing to the diminished amount of blood, for they do not supervene until some time after, when the volume of blood is already restored to the normal through absorption of water from the tissues. The intracardial blood-pressure is therefore nearly the same as before, but because of insufficient nutrition the muscular tone of the heart is lowered and dilatation ensues. When this condition exists, the orifice being relatively too small for the ventricle, only a part of the contents of the latter can pass out, the balance recoiling against the advancing blood-stream, and thus causing a murmur.

Decrease of Red Blood-Corpuscles during the Administration of Iodoform.—Dr. Ludwig Von Hoffer bases the following conclusions on the results of a few experiments made by him on rabbits and syphilitic human subjects: In rabbits a decrease in the number of the red blood-corpuscles and in the weight of the animal was observed commensurate with the dose of the drug. When the iodoform was withheld the falling away ceased and began again when it was readministered. In the case of syphilitic subjects, iodoform administered subcutaneously (in suspension in oil) for a few weeks causes, at first, an increase of the red globules, the syphilitic *hypoglobulia* being overcome. In the cases experimented upon the other signs of syphilis also receded. After a time the continuous administration of iodoform causes, as in the case of the rabbits, a decrease of weight and a lessening of the number of red globules.—*Wiener Medicinische Wochenschrift*, July 15, 1882.

Bilateral General Zoster.—Professor Tommaso de Amicis reports a very rare case of general bilateral herpes zoster in the *Giornale Internazionale delle Scienze Mediche*, part I., 1882. The patient, a woman twenty-seven years of age, about six weeks after the birth of her third child was seized with fever, preceded by a chill, and accompanied with abdominal pains, diarrhœa, and vomiting. Three days later she noticed a redness and puffiness of the hands, arms, and face, and the following day there appeared a vesicular eruption, disposed in groups, and accompanied with a smarting pain. The author thus de-

scribes the eruption as seen by him a few days later: The vesicles, ranging in size from a pin-head to a small pea, are in groups, surrounded by a hyperæmic zone, and contain an opaline fluid, which, in some cases, has become purulent. The eruption is perfectly symmetrical on the two sides of the body. Beginning at the posterior cervical region it surrounds the neck, and, enveloping the shoulders, passes down along the inner side of the arm and forearm, and covers the palm and the latero-dorsal aspect of the fingers. The back is entirely covered, except for a space extending about an inch on either side of the spinal column. The supra-mammary and spinal regions are nearly free from vesicles, though there are a few scattered over the breasts. In the lumbar region the eruption spreads down over the nates and, anteriorly, slightly on the abdomen, showing itself in various points in the inguino-crural region on either side. It then descends along the outer aspect of the thigh, leaving the inner side perfectly free. There are no vesicles on the legs, but they reappear at the malleoli, and run along the edges of the sole, with here and there a few points on the plantar aspect of the foot. The patient suffers from severe smarting pains, but complains of but little itching. The fever ranges from 101° to 103°, accompanied by headache and occasional colicky pains. In some regions the tactile sensibility is increased in the patches of eruption, in others the sound skin between the groups of vesicles is more sensitive. The eruption remained stationary for a couple of weeks, when it began to recede, and at the end of a month had entirely disappeared, without leaving any cicatrices.

Diastolic Heart-murmur without Valvular Lesion.—Dr. N. Weiss (*Wiener Medicinische Wochenschrift*, May 27, 1882) reports the case of a man in whom during life a diastolic murmur was heard at the apex. The murmur was heard continuously for four weeks before death. The other heart-sounds were normal with the exception of the second sound at the aortic valve, which was accentuated. The patient died of cancer of the pylorus. At the autopsy there was found a patch of recent endocarditis on the auricular surface of the aortic half of the bicuspid valve. There were also traces of old endocarditis at the bicuspid with consecutive valvular aneurism; endarteritis deformans of the aorta, with dilatation of the ascending portion; eccentric hypertrophy of the left ventricle; commencing pericarditis with milk spots at the apex and over the right ventricle. The pericarditis could not have caused the murmur, and there is hardly room to doubt that it was connected with the changes found at the mitral valve. The little aneurismal pouches on this valve were turned with their cups facing the auricle, and were also slightly roughened. There was, however, no disturbance of function caused by these changes, nor was there any stenosis of the venous opening into the auricle. Here, then, there was no valvular lesion in the ordinary clinical sense of the term, yet there was a persistent diastolic murmur at the mitral opening observed during several weeks preceding death.

Spontaneous Cow-pox.—Dr. José R. De Argumosa describes a case of spontaneous cow-pox, observed by him in the spring of the present year. A servant called his attention to the cow, saying that she was uneasy when milked and that he had noticed some pimples on her udder. The papules were a little raised, whitish in color, and surrounded with a very slightly inflamed areola. When a crust was formed he removed it and inoculated a heifer in fourteen places on the udder and belly. On the fourteenth day there were six well-formed papules. With the lymph from one of these the author then vaccinated a boy, fourteen years of age. On the sixth day there was slight inflammation, and on the eighth umbilical papules appeared. The following day they were more marked and the boy complained of headache. The axillary glands were swollen and very painful. The vesicles were of enormous size, surrounded by a large erysipelatous areola, and contained a quantity of transparent lymph. The temperature was 38.4° C. The symptoms increased alarmingly, and on the eleventh day the temperature rose to a maximum of 40.1° C. All the symptoms, however, gradually subsided, and in a few days the boy was perfectly well. Seventy-seven persons were afterward vaccinated, and the observer summarizes the results as follows: The period of incubation was larger than is ordinarily the case. The vesicles were larger and surrounded by a much wider areola, and the fever was greater in intensity and duration. The cow in whom the disease was discovered had been separated from other animals for several months, and as small-pox was prevalent in the neighborhood at the time, the author believes that the disease was acquired from man.—*Revista de Medicina y Cirurgia Prácticas*, July 7, 1882.

Traumatic Hæmato-Pericardium.—The patient, a man, twenty six years of age, was caught between two wagons, receiving a severe compression of the chest. He was at first rendered insensible, but after a few moments recovered consciousness and walked to his home. Here he began to cough up blood, and his condition becoming quite serious, he was sent to hospital. About twenty-four hours after receiving the injury he was seen by Dr. G. Tiling, the reporter of the case. He was then pale and weak, spitting up a little frothy blood; temperature slightly above normal; pulse 60. Râles could be heard on both sides of the chest. At the posterior and lower part of the right side there was a fine crepitation with a dull percussion-note, not absolutely flat, and vesicular breathing. The apex-beat of the heart was not perceptible to the eye, difficult to feel, and diffused. Area of dulness extending a finger's breadth beyond the right edge of the sternum. The heart-sounds were masked by various indescribable murmurs in this region, but clear and distinct at the second intercostal space. There were no signs of air in either pleural cavity, and only a small effusion on the right side as indicated. There was no air in the pericardium. There was no fracture of the ribs or sternum. After the third day the patient began to improve and went slowly on to recovery. The pulse continued slow, ranging from 54 to 76. On the tenth day the area of heart-dulness remained about the same, but the heart-sounds were strong and clear without murmurs. A diagnosis was made of hæmato-pericardium from contusion of the heart without fracture of the ribs or sternum.—*St. Petersburger Medicinische Wochenschrift*, May 29, 1882.

The Rest-Cure in Chorea is recommended by Dr. James E. Goodheart (*Lancet*). It is applicable to acute cases only. Several cases with favorable results are reported. The method is essentially that of Weir Mitchell. It is a somewhat heroic measure and could not be employed in many cases.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, September 23, 1882.

MEDICAL MEN AND THE TEMPERANCE QUESTION.

So much is being constantly said regarding the direful effects of alcoholic indulgence, that most persons are, we fear, but little affected by temperance statistics, however startling. To the medical profession the general question of selling and using alcohol has seemed to be a moral or political one, and rather outside of its domain.

Of late years, however, the effects of this agent upon the human organism have been studied with much exactness. The diseases which it will produce and the mortality which it occasions have become known with some degree of accuracy. And it has become recognized that in the study of preventive medicine the effects of alcohol must occupy a large share of the attention.

There has thus developed a medical and scientific aspect to the temperance question which did not exist twenty years ago, when the experiences of reformed drunkards were the chief staple of temperance oratory.

But for all this we very much doubt if the actual and direct influence of alcohol in increasing sickness and mortality is felt as it should be. We are quite sure that the summary of facts regarding this subject presented by Dr. Norman Kerr, at the last meeting of the British Medical Association (MEDICAL RECORD, September 9th), will strike the attention of many on account of its novelty. One man in every seven or eight hundred, he says, is yearly killed in England by the direct effects of alcohol. The deaths and sickness produced indirectly are at least three times more numerous. In the army, deaths are twice as numerous among drinkers as among abstainers. If this is so, and there seems no reason to doubt it, the prevention of the abuse of alcohol should be classed among the most important of the fields of work for the sanitarian.

We would enforce the view that alcoholic abuse is to be looked upon by medical men as a source of disease and death. That it demoralizes the character and produces misery and crime are arguments for the philanthropist to wield. But the physician, by dealing directly with the pathological side, and that alone, can do his share, and make that an effective one in lessening the evil.

Basing its views upon physiological and pathological data, the medical profession cannot take the ground of total abstinence, although individuals may hold to such an opinion for personal reasons. For the disease and death produced by moderate use of liquors is very slight, so far as scientific data at present show. The profession should, we believe, as a body strive to secure the substitution of light and pure alcoholic or of non-alcoholic drinks for those which now do so much physical injury.

The good which properly directed medical effort can do in helping the temperance cause has been strikingly shown in England during the past few years. There has been an enormous increase in the use of non-alcoholic table beverages, and a corresponding decrease in the consumption of malt liquors. The *British Medical Journal*, in a recent discussion of this subject, describes also the remarkable growth of coffee-taverns. These are places fitted up in the heart of the poorer quarters of London, where coffee, cocoa, etc., can be had for a small sum. Over one hundred of these have been opened in London alone, and their success is unquestioned. It would be worth the while to try them in American cities more extensively and carefully than has yet been done.

EXPERIMENTS IN THE PHYSIOLOGY AND PATHOLOGY OF MUCOUS MEMBRANES.

In a series of articles recently published, Professor M. J. Rossbach, of Würzburg, has contributed some original facts to the subject of the physiology and pathology of mucous membranes. His researches point, also, to certain new therapeutical methods in treating diseases of these tissues.

The experiments described were made chiefly upon cats. In these animals the trachea was opened and the appearance of the mucous membrane directly observed under various conditions.

The tracheal membrane was found to be covered uniformly with a thin layer of mucus. If this were removed by gently applying absorbent paper, the secretion returned within from one-half to two minutes, but it was never secreted in sufficient amount to form drops. In other words, the action appeared to cease, or nearly so, as soon as the membrane was completely covered. The secretion of mucus is intermittent, not constant, according to Professor Rossbach. He has hardly proved this point, however, since it is more probable that the secretion is a very slight but constant one, with exacerbations when any irritant is applied. Our author suggests that the mu-

cin is first formed from the epithelium, and is then washed off or dissolved out by the alkaline fluid from the blood, a view that is probable enough. As regards the functions of this lining layer of mucus, Rossbach opportunely expresses the view that it has a protective function against the entrance of atmospheric organisms into the blood. Such a theory is plausible, and happily fits into the present pathological fashion.

Mucus is secreted equally well after the membrane has been severed from all the nerve-centres and trunks. There are, however, vaso-motor nerves running to it from various cerebro-spinal nerves; the mucous secretion is in a certain relation, therefore, with the nerve-vascular system.

Experiments were made to discover the effect of various drugs and reagents upon the tracheal mucous membrane. A hot bread-poultice was applied, then withdrawn and an ice-bag substituted. The membrane at once became whitened and bloodless. In one or two minutes this pale appearance changed to blue, showing venous stasis, and at this time a copious secretion was poured out. Upon repeating the applications of hot and cold, the same phenomena were observed but they came on more slowly and were less marked.

Professor Rossbach's experimental studies with various drugs used in treating pulmonary or bronchial disease, lead to some conclusions that quite contradict ordinary views, if not ordinary experience. As regards the alkalies (carbonate of soda, chloride of ammonium, etc.), for example, Rossbach claims that they do not increase mucous secretion, but the reverse. He experimented by injecting these salts directly into the blood, then watching the mucous membrane. After such injections the mucus was secreted more slowly and in less amount. The favorable action of alkalies in bronchial disease is attributed to a diminution of congestion and lessened secretion which they produce. Rossbach could observe no effect from the direct application of alkalies, as in inhalations.

The direct pencilling of the membrane with astringent solutions, such as alum, tannin, nitrate of silver in four per cent. dilution, caused diminution of secretion and a clouding of the epithelium.

Experiments with oil of turpentine gave some interesting results. If air which had passed through turpentine were blown upon the mucous membrane the secretion was diminished or stopped. Direct application of turpentine in watery solution, however, caused an increased secretion with diminished amount of blood-supply. This substance is a most valuable one, therefore, says Rossbach, since it is at the same time an antiphlogistic and expectorant.

The chief direct stimulants of the mucous secretion were found to be apomorphine, emetin (from ipecac), and pilocarpin. Of these apomorphine is practically the best and most useful.

Of agents which lessen the secretion atropin was found to be most powerful, being able to check the function entirely. Morphine, on the other hand, reduced, by about one-fifth, the normal amount.

As a practical outcome of his experiments Rossbach cites a number of cases in which he has used the drugs above mentioned. In his opinion apomorphine is one of the best expectorants. Combinations of it with morphine are also effective.

Rossbach's views with regard to apomorphine are confirmed by Dr. M. Wertner, of Wartburg, who reports his experience in the *Pester Med. Chirug. Presse.* Jürgensen has also used it as an expectorant in catarrhal pneumonia.

THE PRESERVATION OF BOVINE VIRUS.

THE use of bovine virus in this country for vaccinating has on the whole been a success. Every year it has supplanted more largely the humanized virus. Two objections, however, have been raised, and with some force, against its general adoption. Its action is too severe, and the quality of the virus is extremely variable. Experience in New York amply confirms the latter objection especially.

The points thus made against the use of animal virus have received much attention abroad, where the question whether such virus should be recommended is still, in many places, unsettled.

Not long ago the French ambassador to the court at Berlin deemed it worth his diplomatic time to write a letter to the Academy of Medicine of Paris, informing that body of a certain discovery by which bovine virus could be kept active for a long time. Two German physicians, Drs. Reissner and Pissin, had, he said, claimed to have found such a method. A description of their procedures was given.

Dr. Reissner takes the lymph from a vaccinated heifer, mixes it with glycerine, and allows it to remain upon a glass plate for forty-eight hours. The plate is kept in a dryer such as is ordinarily used by chemists. The mass being finally desiccated, is pulverized, dried again, and then sealed in glass tubes. When used a little is placed in a watch-glass, and water or water and glycerine added.

Dr. Pissin's method is slightly different. He places the contents of five or ten vesicles in a watch-glass which contains about ten drops of glycerine. This is mixed with an equal amount of a one-half per cent. solution of salicylic acid. The whole is then deposited in glass tubes, which are carefully sealed.

Vaccine matter prepared in these ways has been used under the direction of Dr. R. Koch with very encouraging results, having been kept active for eighteen months. Dr. Reissner's method is considered somewhat the better, or at least the more convenient.

It is stated, on the other hand, by the editor of the *Gazette Medicale de Paris* that Dr. Hirschberg (not Samuel), of Posen, has not had so good results, but we are told, further, that this may have been due to unskilful manipulation.

At any rate, it would be worth the while to test these methods here, where bovine virus is so extensely used and where any method which ensured its trustworthiness would be of the highest importance.

Reviews and Notices of Books.

Atlas of Gynecology and Obstetrics. By Dr. E. Martin, Professor Gynecology, University Berlin, and Dr. J. P. Maygrier, Member de l'Academie Roy. de Med., etc. Explanatory text translated and edited, with additions, by Wm. A. Rothacker, M.D., Pathologist to the Cincinnati Hospital. Cincinnati, Ohio: A. E. Wilde & Co.

This large and beautifully printed atlas, giving life-size illustrations of diseases of women and of obstetrics, is mostly made up of Martin's celebrated "Atlas of Gynecology" and Maygrier's popular "Demonstrations of Midwifery." The size of the plates and their faithful reproduction are the distinctive features of the work. The range of subjects is wide and comprehensive, comprising a complete exposition of the anatomy of the womb, gross and microscopical, the relations of the organ to surrounding parts, the diseases affecting the genito-urinary apparatus in the female, including tumors, etc., the signs, course, and mechanism of labor and operative obstetrics generally. Of the five hundred and ten illustrations, thirty-five are colored, thus giving at a glance the different normal and abnormal appearances presented. The text to the gynecological portion is a translation of that contained in Martin's work, while the text to the plates on obstetrics was written specially for the atlas. It is an admirable atlas, and will doubtless find much favor among general practitioners who do much in gynecology and obstetrics.

Diseases of the Ear in Children. By Anton Von Troeltsch, M.D., Professor, University Würzburg, Translated by J. Orne Green, A.M., M.D., Aural Surgeon, Boston City Hospital. 8vo., pp. 165. New York: William Wood & Co. 1882.

This is a remarkably practical work on a class of ear diseases most commonly met with, and goes over the field designated in its title in a concise and masterly manner. The subjects are simply and naturally arranged. To the general practitioner it is almost an indispensable addition to his library.

Syphilis. By V. Cornil, Professor Faculty of Medicine, Paris. Translated, with notes and additions, by J. Henry C. Simes, M.D., Demonstrator of Pathological Histology, University Pennsylvania, and J. William White, M.D., Lecturer on Venereal Diseases, University Pennsylvania. 8vo. pp. 458. Philadelphia: Henry C. Lea's Son & Co. 1882.

Professor Cornil has perhaps studied syphilis from an anatomical standpoint more than any other syphilographer living, and his views, as given in the leçons which form the basis of the present work, will now, for the first time by our English-reading audiences, be appreciated in their full significance. Professor Cornil has gone over the field in a thorough and practical manner, and by his personal investigations, experiments, and study, has thrown new light upon many obscure points connected with the pathological histology of the chancre and its various constitutional lesions affecting skin, mucous membranes, bones, glandular organs, and nervous system. Interspersed with these are numerous clinical illustrations of salient points under discussion. The translators have given very substantial aid in this direction. Dr. James W. White has contributed an excellent note on syphilis of the teeth. The work is a valuable contribution to the literature of the subject, and will be found specially useful to the student who wishes to lay the proper and substantial groundwork for future studies.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-fourth Annual Session.

The Transactions of the Medico-Chirurgical Faculty of Maryland for the year 1882 comes to us in the usual style, and contains the usual amount of interesting material. In our exhaustive report of the meeting, made some months ago, we presented our readers with abstracts of such papers as were of interest and the discussions thereon. These papers are published in full in the present volume, as well as the official reports of the discussion.

Transactions of the Indiana State Medical Society, 1882. Thirty-second Annual Session, Indianapolis, 1882.

This yearly volume is more than ordinarily full of good papers. Notably among the latter are the following: "Case of Complete Transverse Rupture of Vagina at Junction of Uterus," by A. G. Preston, Green Castle; "Hot Water in Surgical Practice," by John R. Weist, M.D., Richmond; "Heredity and its Relations to Diseases," by J. Iutzi, M.D., Richmond; "Health Resorts in the United States," by E. S. Elder, M.D., Indianapolis; "Primary Cancer of the Lung," by G. W. H. Kemper, M.D., Muncie, and "Laceration of the Female Perineum," by H. V. Sweringen, Fort Wayne. The volume is of the usual style and size of its predecessors.

A Rationalistic Materialistic Definition of Insanity and Imbecility, with the Medical Jurisprudence of Legal Criminality. Founded upon Physiological, Psychological, and Clinical Observations. By Henry Howard, M.R.C.S., Eng. Montreal: Dawson Brothers. 1882.

Dr. Howard considers insanity "to be a physical disease, caused by a pathological change in the sensory nerves and organs of consciousness, or either, consequently loss of consciousness, increased reflex action, confusion of intellect, loss of intellect, necessarily loss of normal reason; insanity."

The quotation of the above might be considered sufficient criticism of the book. Yet it deserves a kinder treatment. Dr. Howard writes with a deep sincerity and earnestness, which claims our respect. The main points for which he is arguing also are, no doubt, correctly taken. There is, however, hardly a page in which he does not insert some physiological error, or exhibit a psychological crudeness. He gropes blindly toward his goal.

It strikes us also that Dr. Howard equips himself with much labor to prove what is already accepted. Certainly there are very few medical men

who deny that insanity is a physical disease. And so long as no one knows what matter or what essence is, there can be no harm in saying, as Dr. Howard does, that mind is one of the phenomena of matter, as we know it, remembering that with equal truth one can say that matter is a phenomenon of mind.

DOCTOR, WHAT SHALL I EAT? A Handbook of Diet in Disease for the Profession and the People. By CH. GATCHELL, M.D. Second edition. Chicago: Duncan Brothers. 1882.

THIS little book is quite well compiled and well arranged. It is better than one would infer from its awkward and infelicitous title.

THE MEDICAL DIGEST; or, Busy Practitioner's Vade Mecum. Being a Means of readily acquiring Information upon the Principal Contributions to Medical Science during the last Thirty-five Years. By RICHARD NEALE, M.D. Second edition. London: Ledger, Smith & Co. 1882.

THE first edition of this Digest was printed by the New Sydenham Society in 1877. It is now enlarged and brought down to date. It consists of a subject-index to all the leading English medical journals, including, in addition, one or two Scotch and American journals, and a few standard medical works. The number of journals and books indexed is large and well selected. The list includes, however, several monthly and quarterly periodicals devoted to abstracting foreign articles. The Digest, therefore, contains a reference to nearly everything of medical importance which has been published in the past thirty five years. The indexing is very thoroughly done, there being in almost all cases cross references. The reader can, without trouble, find all the articles upon any given subject published in the journals indexed. There are, we are informed, nearly ten thousand references and over one hundred and twenty thousand distinct entries.

The author says that the work has occupied him, on the average, *four hours per diem for thirty-five years*—a statement that compels us to look at the book with some awe as well as respect. The time which Dr. Neale has lost, the profession will gain. His book cannot fail to be of immense service to all practitioners, whether "busy" or not.

THE NATURAL HISTORY OF DOCTORS.—M. Colien, says *L'Union Médicale*, compares the different classes of the medical world to those of the ornithological world, and thinks that Cuvier's classification adapts itself perfectly to the disciples of Æsculapius, *e.g.*:

First Class.—The *Rapaces*. The eagle holds the first rank. Such are our great physicians, our great surgeons and specialists.

Second Class.—The *Passereax* (sparrows, etc.), which includes the medical journalists (*diarii*) and bookworms (*bibliophylaces*).

Third Class.—The *Grimpeurs* (climbers), who can hardly fly at all alone, but are very skilful in making use of the help of others.

Fourth Class.—The *Gallinaces*, of which the representatives are the army surgeon (*iatros cristatus militaris*) and navy surgeon (*iatros cristatus aquaticus*).

Sixth Class.—The *Palmipedes*, aquatic birds who live in water, upon water, and by water. Of these there is a sub-class, the *Saccharum lacti ferendes*, who live upon sugar of milk.

Correspondence.

CASE OF ACUTE ASCENDING PARALYSIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I was called, July 1, 1882, to see Maggie M——, a healthy, robust, unmarried lady, thirty years of age, who, during her whole life, had not suffered from ill-health. I found her lying upon a lounge, feeling, as she expressed herself, quite comfortable, except that there was a bitter taste in her mouth and she could not move her lower limbs. As she said, her "knees gave way" upon trying to stand. She was entirely helpless from her knees down. Sensation was not impaired. She had had several chills, and was evidently suffering from the malarial influence which prevails in this region to a considerable extent. The arms and upper portions of the body were not affected. I did not consider it a serious matter, having lately met with malarious patients affected in much the same way, though in a minor degree. I regarded it as simply a novel concomitant of the bilious disorders of the season. By the next day the disease had made further progress, involving the whole of both limbs, including the hips, so that the patient was entirely unable to walk. Still, sensation was perfect, and the functions of the body above the hips complete. The greatest source of complaint, aside from inability to walk, was the excessive bitterness in the mouth, which continued to the end. Without following the case in detail throughout its course of eleven days, I will state that the paralysis was steadily progressive from below upward, affecting both sides of the body equally, except the face, the muscles of one side only being affected. The motion of the forearms remained more or less perfect throughout the disease. The case ran on until the tenth day without any modification of the symptoms, but on that day the muscles of deglutition and respiration became seriously affected, placing the life of the patient in imminent danger. These symptoms grew rapidly worse, and the patient died on the afternoon of the eleventh day of the disorder. The febrile symptoms manifested in the progress of the case were those of a remittent character, and were always moderate. There were two points of tenderness along the course of the spine—one at the beginning of the dorsal region, the other one at the junction of the lumbar with the sacral vertebræ.

My treatment consisted in the administration of antiperiodic doses of quinia, strychnia, and the use of counter-irritation to the spine. This was followed out for several days with the concurrence of Dr. C. B. Pearson and Dr. T. F. Stair, of Mazomanie, called in consultation. Subsequently, my friend, Dr. Cutler, of Dodgeville, saw the case with me, who recommended, in addition to counter-irritation, thorough mercurialization and iodism. His suggestions were carried out.

Perhaps physicians in longer practice may be enabled to recall cases of this kind frequently, but to me the circumstances surrounding the case are peculiar, and I have not been able in my reading to find anything analogous to it. It seems to me the obscurity (if it is such) lies particularly in the direction of the cause. I have tried to show in this imperfect statement of the case the presence of the distinctive characteristics of a mild form of bilious

remittent, the rapid progress to a fatal termination, the previous perfect health of the patient, the presence of similar symptoms—though much milder ones—in malarial cases occurring at the same time.

J. B. Stair, M.D.

Spring Green, Wis.

BORO-GLYCERIDE.

To the Editor of The Medical Record.

Dear Sir: I have read with interest your editorial in The Medical Record for September 2d, concerning boro-glyceride. Its antiseptic properties and usefulness in surgical dressings were first brought to my notice in the wards of the Charing Cross Hospital this summer. I had been watching with interest the use of iodoform in the German surgical wards during the winter, where it is used profusely.

In the Charing Cross Hospital I had the opportunity of *comparing* the carbolic iodoform and boro-glyceride surgical dressings. It is fair to say that the worst cases were given to boro-glyceride, but with the most gratifying results. In the boro-glyceride treatment you get *no increase of temperature*, in other words, no poisoning, as in the case of carbolic and iodoform treatment. The wounds have a healthy and cleanly appearance, healing rapidly, which is most satisfactory, and the whole condition of the patient seems to be better under this mode of treatment. Combined with vaseline, it makes an admirable dressing in minor surgical operations, ulcers, etc. In solution, it is valuable as an injection in vaginitis, otorrhœa, etc. Its introduction into surgery seems most fortunate and most satisfactory, and it will undoubtedly take the place of either carbolic acid or iodoform. A very superior preparation of boro-glyceride can be obtained of Messrs. Theodore Metcalf & Co., Boston.

I sincerely hope that the valuable properties of this new antiseptic will be appreciated by the profession.

Very truly yours,

W. Thornton Parker, M.D.

Jamaica Plain, Mass.

THE CLIMATE OF FLORIDA.

To the Editor of The Medical Record.

Sir: Dr. Haywood's experience, as given in The Record of August 12, conflicts decidedly with that of most medical men in this State. In my own case several years' residence in the highlands of Central Florida have relieved me of a harassing cough, night sweats, a hectic flush, anorexia, and from the invalid of one hundred and thirty pounds weight, dreading the cold, I now am able for continuous labor, weigh one hundred and sixty-six pounds, and have long ago discontinued the use of cod-liver oil, phosphites, etc.

Dr. Z. H. M——, of Apopka, Fla., has a similar experience. Coming from Georgia to find a temporary respite, year after year has passed away and the doctor now is the picture of rosy health in his old age.

Dr. C. J. K——, of Jacksonville, an old traveller, a scientific investigator, and widely known for his own case, has tried many climates and has fixed upon Florida as the best.

Twelve years ago Dr. McM——, of Charleston, S. C., brought his wife, a confirmed consumptive, to Gainesville, Fla., to spend what seemed a small remnant of life more comfortably. To-day she bids fair to reach the "three-score and ten," despite the "exceedingly debilitating" climate.

Col. J. H. R——, came from South Carolina as a winter resort, having all the symptoms of phthisis in an advanced stage. Now he is an active, comparatively healthy man, utterly unlike his former self.

I need not multiply examples, almost every neighborhood in this section can supply them, of the competent medical men who in their own cases are satisfied of the value of this climate as both preventive and curative of tuberculosis.

In this section of the State, high, dry, rolling pine land, and perfect drainage, in six years and in one thousand cases I have seen but four of pneumonia, and two of these traumatic. Can Dr. Haywood say as much even for Beaufort or Raleigh?

During the summer we have a mild form of malaria, but as to effect of such a climate upon phthisis I would refer him to Dr. Lawson, pp. 297, 389. Aitken, vol. i., p. 265.

These malarial attacks are easily subdued, and fatal cases are rare. Too many physicians allow their patients to remain in a cold, changeable climate until the lungs are a mass of tubercle, then send them to Florida too feeble to take out-door exercise, often with but little money to procure attentions or delicacies necessary, and among strangers the poor invalid becomes nostalgic and sinks rapidly, and then Florida is blamed. This ought not to be, but every season finds our hotels filled with cases that should be at home among friends, making ready for the rapidly approaching close of life.

There is, however, a positive curative agency in this climate for certain ailments, and to guide the profession, I beg to submit the results of many years of careful study both of cases and climatic factors.

These factors are location, soil, drainage, water, sunshine, temperature, humidity, and air-pressure. And with reference to a strip of elevated land, lying forty miles from either coast and extending from 28.30° to 30° latitude, I think no place east of the Rocky Mountains is better suited for the amelioration if not cure of incipient tuberculosis, asthma, catarrh, nervous complaints, and bronchitis.

The location—Almost insular, constantly traversed by warm breezes from the sea and gulf, in the track of trade winds, and the freshness tempered by miles of almost unbroken forest.

Soil.—Very sandy with but little humus, or animal remains; configuration broken, rotting, often eighty to one hundred and fifty feet elevation above the gulf. Drainage perfect, no stagnant pools or marshes.

Water.—In the main freestone, in wells twenty-five to sixty feet deep, with an average temperature of 65° F.

Timber.—The long-leafed pine, with little undergrowth, allowing free circulation of air.

Sunshine.—Twenty-two days of each month of almost clear skies, the remainder often partly available for out-door exercise, and during the winter the rains are usually at night, leaving the day cool and bright (see note). The rainy season begins in June and lasts till September. Often a week of showery days, then clear skies a week. During the rains the temperature falls to 72° F., and this season, in comparison with the torrid days of the north, is

quite endurable, and as these showers rarely last but a few hours, the remainder of the day is available for exercise or labor.

Temperature.—Unquestionably a climate allowing a loose easy costume with few wraps, and no requirements of hot, stove-heated, badly ventilated rooms, is best for weak lungs. The houses of this section are built for free ventilation—no stagnant air in cellars or close dirty bedrooms. Blizzards, northers; sudden changes, causing cold extremities, visceral congestions, or surface chilling, are extremely rare, and as they occur, if at all, in December or January, can easily be kept from harming.

The summer maximum is usually 96° F., and this for only a few hours. But 96° is not common. In 1880 it reached that point but four times in June, once in July, and once in August; this year twice in July and once in August.

The night temperature for the months from May to October is from 70° to 76°, and from October to May, 60° to 65°. The hot, sweltering nights so common in the North are unknown here. October, November, and till April are months comparable with the Indian summers of Pennsylvania—days dry, breezy, and bracing, the whole season enjoyable. (See Note.)

Humidity.—Much has been said of the dampness of Florida, but the observations of the Signal Service show nothing excessive in its humidity, and this section compares favorably with most health resorts, the annual mean for a long series of years being 69° against 73° at Menton, 68° at Nassau, 67° at St. Paul, Minn.

Air-pressure.—I have no doubt but that this is the most important factor of value in our climate—its remarkable equability of air-pressure. If we regard in the lung the pressure of the heart upon the mass of the blood as balanced against the air-pressure and strength of the blood-vessel walls, it is readily seen that in a diseased lung, a decrease of air-pressure tends to congestion, and at points of weakened tissues from any cause, if the air-pressure be sensibly diminished, hemorrhage may occur. Any physician will recall instances showing that the changeable months of spring and autumn occasion great distress to tuberculous patients, and the cold of January was not as fatal as the storms of March. A fall of even one-tenth inch mercury in the barometer produces a decided discomfort, and the descent of half an inch a temporary congestion, dyspnœa, headache, or neuralgic pains. Hence patients can often predict storms from their disagreeable sensation.

A climate offering the maximum of air-pressure and the minimum of change, with a genial temperature, leaves but little to be desired for patients requiring rest and warmth, and this section surely meets the wants of such cases. (See Note.)

A dozen invalids live near me, some hemorrhagic, some neuralgic, but all have experienced relief, and the majority of cases of rheumatism, asthma, bronchitis, and catarrh are alike favorably affected by this equability.

The practical deductions are readily apparent.

Northern invalids, in which the deposit of tubercle is incipient or limited; aged invalids requiring rest, warmth, and relaxation; neuralgic cases, nerve-worn patients, the whole range of uterine troubles resulting from congestions, all cases that grow better in the warm settled days of May or October, and get worse in November and March—these should be advised to try Florida, especially this section, with hope of betterment.

With discharging cavities, or fully tuberculized lungs, little aid can be given, though our 220 clear days, average air-pressure of 30.03 inches, and mean temperature of 71° will aid in pleasantly prolonging life.

Many when here neglect the most common sanitary laws, expose themselves recklessly to heat, rain, and dew, take fatiguing exercise, sit in draughts, eat to excess, and do not derive the benefit they should.

A little common sense would obviate this, and save much blame now given to Florida.

JAMES C. NEAL, M.D., PH.C.

ARCHER, FLORIDA, August 28, 1882.

NOTES.—*Temperature.* Mean, December and January, 55°; February 58°; March and November, 63°; April and October, 70°; May and September, 77°; June, 80°; July and August, 82°.

SPECIMEN DAYS, 1880.

Observations, 7 A.M., 2 and 9 P.M. Archer, Florida.

Jan. 7..	52°	76°	72°	Feb. 11..	54°	78°	68°	Mar. 14..	68°	83°	74°
8..	58	75	68	12..	62	76	71	15..	67	84	75
9..	56	72	68	13..	70	80	73	16..	72	76	70
Diurnal range, 14.4°.				Diurnal range, 14°.				Diurnal range, 14.9°.			
May 12..	72°	77°	73°	June 17..	96°	86°	76°	July 25..	76°	80°	78°
13..	72	76	73	18..	76	83	75	26..	78	80	80
14..	72	74	72	19..	81	88	76	27..	76	80	76
Diurnal range, 16°.				Diurnal range, 17°.				Diurnal range, 18°.			
Oct. 11..	76°	84°	76°	Nov. 28..	64°	80°	72°	Dec. 14..	60°	72°	58°
12..	73	84	74	29..	64	76	72	15..	63	74	70
13..	68	82	76	30..	59	77	68	16..	64	76	70
Diurnal range, 17.6°.				Diurnal range, 18.4°.				Diurnal range, 13.9°.			

Air-pressure.—Mean, 6 months, 1882, 30.061. Range, .03.

SPECIMEN DAYS, 1876.

June 3....	Mean Bar.,	29.937	Oct. 29....	Mean Bar.,	30.090
" 4....	"	29.904	" 30 ...	"	30.073
" 5....	"	29.902	" 31...	"	30.055
Monthly Mean Bar.,		30.029	Monthly Mean Bar.,		30.027

1880. BAROMETRIC CHANGE	of less than .01 in.	02. in.	03. in.	04. in.
No. of days in January	6	8	11	4
" " February	2	2	3	5
" " March	2	4	2	3
" " April	4	5	4	6
" " May	6	4	6	6
" " June	2	3	4	6

June, 1882: Monthly mean, 30.041; Rainfall, 9.56 inches.
May, " " " 30.014; Rainfall, 1.71 inches.

Clear days—Winter, 59.8; Spring, 64; Summer, 55: Autumn. 56 4,

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 9, 1882, to September 16, 1882.

WRIGHT, J. P., Surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month, on Surgeon's certificate of disability. S. O. 181, Department of the Missouri, September 8, 1882.

MADDOX, T. J. C., Assistant Surgeon. To proceed from Fort Clark, Texas, via San Antonio and Larido, to Fort Brown, Texas, for duty. S. O. 96, Department of Texas, September 8, 1882.

TAYLOR, MORSE K., Assistant Surgeon. Relieved from duty as Attending Surgeon at Detroit, Mich. S. O. 157, Department of the East, September 9, 1882.

CORSON, JOSEPH K., Captain and Assistant Surgeon. Granted two months' leave of absence. S. O. 210, A. G. O., September 9, 1882.

SHUFELDT, ROBERT W., Captain and Assistant Surgeon, now awaiting orders, to report by letter to the Commanding General Department of the South, for assignment to duty. S. O. 209, A. G. O., September 8, 1882.

BACHE, DALLAS, Surgeon. Informed by Adjutant-General of acceptance of his certificate of disability of August 31, 1882. On sick leave from September 1 to 30, 1882.

HORTON, S. M., Major and Surgeon. Granted one month's leave on surgeon's certificate of disability. S. O. 96, Department of the Platte, September 11, 1882.

WRIGHT, J. P., Surgeon. Granted one month's leave of absence, with permission to apply for extension of one month, on Surgeon's certificate of disability. S. O. 181, Department of the Missouri, September 8, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — **Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 16, 1882.**

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 9, 1882.	0	26	26	1	7	33	0	0
Sept. 16, 1882.	0	26	18	4	4	26	0	0

THE SEA-SIDE SANITARY HOTEL OF THE FUTURE.— Anxious guest to hall-boy: "Boy, where are the water-closets?" "Hain't got any, sir; they breeds fever. Boat goes down the harbor every morning. Ladies at nine, gentlemen at ten." "Well, is dinner ready?" "No, sir. We always carbolize the dining-room before meals. Now they are spraying the waiters, sir." Impatiently: "Well, where is your ice-water?" "Don't have drinking-water now, sir. 'Tain't healthy. Yonder's our Labarraque mixture flavored to taste. Have a glass, sir?" Guest retires and takes a thymolized julep.

THE NEW YORK COLLEGE OF VETERINARY SURGEONS has removed from the former College building, No. 205 Lexington Avenue, to the College of Pharmacy in East Twenty-third Street, where the Fall session will open on October 4th, the lectures of the College of Pharmacy taking place in the evening, and those of the College of Veterinary Surgeons in the morning and afternoon. The arrangement is a convenient and fortunate one for both parties. The faculty remains unchanged; and, in addition to the regular corps of professors, a large staff of special lecturers has been secured by the efforts of President Rawson; and the veterinary students will also have access to the practical chemical course of the College of Pharmacy.

COTTAGE HOSPITALS.—Dr. Charles A. Hart, of Plainfield, N. J., writes: "I was very much interested, in a recent issue of THE RECORD, in the article on 'Cottage Hospitals,' but was disappointed at seeing no mention of the pioneer effort of the kind, in the establishment of the Muhlenberg Hospital of this place. The building in point of construction combines the latest known advances in hospital architecture, having a capacity for twenty-five patients. It has been in active running operation since last December, and has already given aid to over fifty patients. The cost of the building was about $5,000. The increasing usefulness is demonstrating itself daily, and before long will require additional force for its running."

SWALLOWING OF TWENTY NEEDLES BY A CHILD.— A boy, aged three, while playing with a needle-case, had swallowed twenty needles (5 ctms. long). Five days later, sixteen needles were discharged per anum, glued together by fæces. The remaining four came out, one by one, on the sixth and seventh days. There were no symptoms, except occasional abdominal pain, and no treatment.

SAMARITAN SCHOOLS.—Prof. Esmarch, the well-known surgeon of Kiel, recognizing the advantages of immediate attendance in cases of accidents, has instituted a number of schools in that city which are called Samaritan schools. They are composed of youth of both sexes who are so instructed that in case of accidents they can render every assistance necessary until the arrival of the physician. Prof. Esmarch has written a small work upon the subject, in which he exposes the various means to be employed under such circumstances.

HEMORRHAGE AFTER TONSILLOTOMY. — Lefferts (*Archiv. of Laryngol.*, Jan. 1) in five hundred tonsillotomies found: 1. A fatal hemorrhage very rare. 2. A dangerous one occasionally. 3. A serious one in both immediate and remote results not very unusual. 4. A moderate one requiring direct pressure and strong astringents to check it common. In the majority of cases no trouble is experienced.

PROGRESS OF HOMŒOPATHY.—At the recent meeting of the American Institute of Homœopathy, at Indianapolis, Dr. Talbot, of Boston, read a report showing that there are 7,000 homœopathic physicians and 278 institutions in the United States; four national societies report 1,067 members; twenty-six state societies, 1,783 members; one hundred and three local societies, of which sixty-six report 2,355 members; twenty-three general hospitals, of which eighteen report 1,268 beds. The cost and values of these hospitals are $1,106,000. Of twenty-nine dispensaries, twenty-seven reported having treated last year 1,469 patients; to these had been furnished 256,589 prescriptions. Twelve medical colleges have had 1,267 students, and graduated 412 physicians this year, and 1,680 since they were founded.

EXPERT TESTIMONY.—A case was recently tried in Chicago which brought up this question in a new phase. A member of the Eclectic society was expelled for violating its code of ethics by advertising a patent medicine. He brought a suit of criminal libel against the president of the society. During the proceedings several lay witnesses were called to testify to the virtues of the medicine. Their testimony was excluded on the ground that they were not experts, and consequently not capable, legally, of giving evidence on the subject. The point at issue in the case was not of special medical interest, but this decision is, as it gives legal sanction to what has been long recognized as a fact by the profession. In the war against patent medicines this decision may yet prove of value.—*Chicago Medical Review.*

RUSSIAN NAVY MEDICAL SERVICE.—Dr. Burch, the Director-General of the Medical Department of the Russian Navy, has been placed on trial for receiving bribes for promotions given to subordinates. Eighty-

six surgeons testified that Dr. Burch has not for many years made a promotion without receiving such a payment; in one instance the sum paid being three thousand one hundred rubles.—*Chicago Medical Review.*

A Peculiar Diagnosis.—A case of small-pox at Fort Worth, Texas, was diagnosed by the irregular practitioner in attendance as "erysipelas from the toes to the knees, measles from the knees to the waist, and seven-years itch from the waist to the top of the head." In consequence of this diagnosis several persons, who were allowed to visit the patient, contracted small-pox.—*Chicago Medical Review.*

Scurvy is on the increase in the British mercantile marine, though to no very alarming extent. The cases reported in 1880–81, were ninety-nine against seven in 1873, and eighteen in 1874.

Antiseptic Midwifery.—Dr. F. Barnes is said to deliver his hospital patients under the carbolic spray. This is the lunacy of Listerism.

The Ratio of Deafness to Population in Prussia, according to the last census, is 10.2 per 10,000, the total number being 27,794. This is an increase of about eighteen per cent. in the past decade. In 9,468 the deafness was congenital. Among Protestants the deafness amounts to .98 per cent., among Catholics to 1.09 per cent., among Jews to 1.438 per cent. The excess among the Jews is accounted for by their custom of intermarriage.

The Anti-Fat Dietary of Mr. Joseph Harass, by which he reduced his weight in nine months from 187 to 150 lbs. is as follows: Breakfast.—Vegetables, brown bread (toasted), water, with lemon-juice, and occasionally oatmeal. Dinner.—Vegetables, brown bread, water, and plain pudding. Supper.—Brown bread (toasted), stewed fruit, and water. No tea, coffee, cocoa, or milk, except skimmed, and only a trifle of butter.

Will Salting Kill Trichinæ?—M. Colin and other experimenters have claimed that salting will kill trichinæ. M. Fourment has just contributed evidence to the contrary. He took a piece of meat on April 19, 1881, from some American salted meats examined at the Havre docks and found infested. The meat was placed in a flask and imbedded in fine salt. It was then hermetically sealed and not opened till April 1, 1882. By this time the meat had undergone a year's salting carried to the highest degree, and if we add the time that must have elapsed since it was first put in salt in America (which could not be put at less than three months), the meat may be said to have been in salt for at least fifteen months. The meat was then cut up into small pieces, and these were placed in water, which was frequently changed to remove the salt, and remained for several hours in a temperature of 71° F. On April 4th, 5th, and 6th this was fed to a mouse, which died on the 7th, after presenting symptoms of diarrhœa. The intestine was evidently inflamed, and contained sexually developed trichinæ. A second and a third mouse were fed with more of the meat, and with exactly similar results in each case. Several other experiments were made. M. Fourment says that all show that the trichinæ were then certainly alive and capable of reproduction after fifteen months of salting; and it is consequently manifest that salting does not surely and rapidly destroy these parasites. They may die in salted meats as well as in any other situation, and thus explain the negative experiments published by distinguished observers; but they may also live a considerable time without our being able to determine the length of the period after which death necessarily follows latent life. But, although salting is thus an uncertain remedy, there need be no danger whatever from trichinosis if only the meat be properly cooked. In no single case—and there have been numerous experiments made—has heat failed to entirely destroy these parasites. Fjord, in Sweden, and Krabbe, in Germany, have both proved that a temperature of 129° F. kills trichinæ if maintained for fifteen minutes, while 158° F. has been shown by many experiments to kill instantaneously. Only those who neglect the precaution of thorough cooking—absolutely necessary in the case of all pig meat and sausages—need be under any fear of these parasites.

State Boards of Health.—Only nine States are now without a State Board of Health. These are the following: Florida, Kansas, Maine, Missouri, Nebraska, Nevada, Ohio, Pennsylvania, and Vermont.—*Dr. Gihon in Am. Med. Association.*

Operating for Elephantiasis.—Dr. George A. Turner, for twelve years a medical missionary in the Samoan Islands, has published in the *Medical Abstract*, a report of one hundred and thirty-eight cases of amputation of the scrotum made by himself, for elephantiasis Arabum, of which number only two died. There is nothing about his mode of operating which can be regarded as new, except his use of a large clamp to restrain the hemorrhage during the operation. His success was, however, remarkable.

Hasuer of Prague.—Let me devote a little space to Hasuer, the oculist. His name is familiar only to the students of ophthalmological literature, at home, and yet I suppose he is the most expert and rapid operator, perhaps, of the present century. May 16th is the day allotted in the calendar to St. John Nepomuck, the patron saint of Bohemia. On this day the halt, the maim, and the blind come in from all the surrounding country for treatment. Among this motley crowd are a great many cataract cases, and on one of these occasions, having his patients all made ready, Hasuer is known to have operated on *twenty-three eyes in one hour.* I have seen him several times, and can testify to the wonderful rapidity and certainty of his movements. I saw him one day remove two cataracts from different patients in different rooms, and also operate on both sides for strabismus, *within six minutes.* Of course no anæsthetic was used, and all the dressing was left to the assistants. Hasuer has his own method of extracting cataract. He uses a Beers knife, makes an incision closely corresponding to the Graefe cut, and then, instead of an *iridectomy*, he performs an *iridotomy.* Most of his results are wonderfully good. Surely the method is deserving a trial on your side of the ocean.—*Roswell Park in Chicago Medical Journal and Express.*

The "Gonococcus."—Neisser, in Breslau, who in 1879 published the discovery of a micrococcus which was to be found in every case of specific blenorrhœa either of urethra or of eye, but nowhere else, has recently recorded his conviction that this "gonococcus," as he christens it, is the specific agent in producing the disease; and quotes Aufrecht, Ehrlich, and Gaffkey, the ophthalmologists Leber, Sattler, and Hirschberg in support of his statements. But until recently the *experimentum crucis*—successful inocu-

lation of the micrococci—had never been performed from the simple fact that animals are not susceptible to the gonorrhœal contagion, and human subjects have always preferred to acquire theirs in another way. Recently, however, Bokai, in Pesth, was so fortunate as to find six philanthropic students who placed their urethras at the disposal of science. With the "gonococci" which Bokai had cultivated artificially from gonorrhœal discharge, the six were inoculated; and three had the satisfaction of exhibiting a week later a classical gonorrhœa. For one somewhat familiar with the natural history of medical students, the experiment would have been far more convincing if the dauntless three had been kept in solitary confinement for a week before and after the inoculation.—*W. T. Belfield in Chicago Medical Journal and Examiner.*

Prague as a Medical Centre.—In every respect, then, Prague deserves the attention of any one going abroad to study. Everything is cheap, even whatever private instruction a man may want. I think no one ought to study in Europe until he has done some work and some practice at home; but to such I can most cordially commend Prague, both as a place where he will be treated much better in every respect than in Vienna, and as a field for study which compares most favorably with Berlin and Vienna, and perhaps ranks next to them.—*Roswell Park in Chicago Medical Journal and Examiner.*

Woman's Hospital of the State of Illinois.—The following is the arrangement of the staff since the recent organization: Dr. W. H. Byford, Dr. J. H. Etheridge, Dr. Daniel T. Nelson, Dr. H. P. Merriman, Dr. E. O. F. Roler, Dr. E. Warren Sawyer, Dr. A. M. Davenport. Consulting Physicians: Dr. J. Ramsey Flood, Dr. D. R. Brower.

Chloride not Chlorate of Potassium is the specific for mercurial stomatitis. As pointed out by Professor Wertheim recently, the chlorate is very generally prescribed. The chloride can be used in saturated solution for the above trouble. It is less irritating than the chlorate.

The Medical Chronicle is the title of a new monthly journal edited by Dr. George H. Rohé and published in Baltimore. It is the only medical monthly in that State. It presents a good appearance and makes the one hundred and eighty-fifth American medical journal and the seven hundred and eighty-seventh medical journal in the world.

A New Treatment for Small-Pox.—Some months ago Dr. Ducastel reported a new method of treating small-pox. It consisted in the administration of a mixture containing opium and ether, of a second mixture containing perchloride of iron, of the hypodermic injection of ether, and the administration of alcohol. Since May 1st, Dr. Dreyfus-Brisac has been in charge of some small-pox wards, at the Hospital St. Antoine, where he has had an opportunity of testing its value. His report is published in the current number of the *Gazette Hebdomadaire.* The treatment was at first carried out in its entirety, but after a time the perchloride of iron was omitted except in hemorrhagic cases. The injections of ether were disagreeable, but not enough to cause any of the patients to refuse them. Sometimes they caused a painful inflammatory induration, which occasionally terminated in a purulent collection, requiring incision, or in a small superficial sore which heals up rapidly. The effect of the treatment on the general intoxication remains problematic, but its influence on the eruption is undeniable. The papules on the mucous surfaces as well as those on the skin abort. Small-pox is transformed practically into varioloid, and the serious complications of the third period of the disease scarcely ever occur. In many of the cases a severe eruption of boils, without any evil consequence, occurs during convalescence. Dr. Dreyfus-Brissac has always endeavored to carry out the treatment with opium and ether, but he thinks that the former plays the more important part, for when the mixture, as occasionally happens, is rejected by the stomach, and the treatment is practically reduced to the hypodermic injection of ether, the result is far from being as satisfactory as with the mixed medication.

Bromide of Potassium in Diabetes.—M. Felizet, a Paris surgeon, claims to have cured fifteen cases of diabetes by the use of bromide of potassium. He reports experiments showing its favorable action in artificial diabetes produced in animals. Others have not been so successful as M. Felizet.

Composition of Commercial Foods.—In the *Centralbl. f. allgem. Gesundheitspflege* Stütze records the results of an analysis of a number of commercial foods, breads, biscuits, prepared meal, etc. We cite a few of these:

	Digestible albumen.	Fat.	Carbohydrate.	Water.	Salts.	Alcohol.	Carbohydrate with extractive glycerine, etc.	Extractive (creatin, etc.).
Prepared oatmeal....	9.12	7.10	72.51	10.3	0.95			
Nestle's Food.....	9.9	5.16	79.30	4.17	1.4			1
Fresh white bread...	7.20	0.28	60.76	30.2	1.48			i
Hoff's malt extract ..	0.28	..	...	91.29	0.13	1.20	7.10	.
Linck's malt extract.	2.50	..	63.46	33.11	0.93			
Cacao (Lobeck's)....	4.16	33.4(!)	52.00	6.55	3.78			
Ordinary lean beef...	18.53	3.45	..	74.26	1.17	..	..	2.59
Liebig's extract of meat	3.40	..	..	19.57	23.18	..	..	53.85
Anglo-Swiss condensed milk.....	8.79	10.45	54.22	24.79	1.75			

A pound of lean beef contains about as much digestible albumen as fifteen hen's eggs. The following instructive table shows the change in making soup by boiling lean beef in water with salt for four hours.

	Left over in the soup.	Remaining in the meat.
Digestible albumen.....	1.51	17.02
Fat.....	0.52	2.93
Extractive (chiefly creatin)....	2.29	0.30
Salts.....	0.82	0.35
Phosphoric acid	0.318	0.187

Patent Medicines and Quack Nostrums.—Dr. W. W. Hebbard, of Boston, Mass., writes: "Boards of health and newspaper experts are dealing out cautions and suggestions to the people about unhealthy water, poorly ventilated buildings, malarial atmospheres, infectious diseases, etc., insisting that the health of the community demands the solicitude of citizens and the attention of officials to these important facts. And I agree with them, knowing and publicly teaching so long that many fatal diseases are traceable to these malign influences; but in the name of public safety, to say nothing of medical honor and professional rights, why is nothing said of the widespread and deadly influences of patent medicines and quack nostrums? Small-

pox, cholera, scarlet fever, typhus, diphtheria, anæmia, marasmus, consumption, heart diseases, etc., owe their origin and their fatal ends more to swallowing '*miraculous*' nostrums than they do to bad atmospheres and poor water. Alas! because no immediate bad results are experienced, the poor victims (their number is legion) continue to swallow these 'wonderful discoveries,' and by and by wonder that they are so 'kinder gin out like,' and so keep on dosing, just the same as 'old tipplers of the bottle' do, to stimulate their worn-out energies, until the whole body is emaciated, the throat filling with phlegm, the sight dimmed, the ears 'dull of hearing,' the chest oppressed, cough sepulchral; and now these wretches, seeing the pale king smiling coldly upon them, appeal to Divine Providence and—*send for a physician*, and die declaring that they have no faith in doctors! Congress ought to be ashamed of so ignorant, so infamous a law that encourages and sanctions the sharpers whose 'wonderful discoveries' are robbing suffering humanity, poisoning the human system, and demoralizing the medical profession. Medical conventions should be held for the sole purpose of repealing this law at once. I am almost ashamed of my own profession that it is so dilatory and negligent in saving itself from the terrible vortex into which an ignorant Congress and sharpers are plunging it. I am more than ashamed that our State medical associations do not do their utmost to force every pretended 'discovery,' of whatever name, to submit to a board of at least four of the best physicians before said 'discoveries' or any nostrums should be allowed to go into a human stomach. Still farther, I am almost astounded that all the States do not follow the example of New York, New Hampshire, and others, in putting a stop to any one practising medicine who is not a graduate in regular standing, or a licentiate, that thus we may be protected from notorious frauds and poisonous dosing, and an additional step inaugurated toward the much-needed reform."

Hydrophobia and Dog-muzzles.—In Bordeaux, between 1876–78, when dogs were muzzled, there were 5 mad-dogs which bit 52 other dogs, 1 cat, and 1 man. Between 1871–81, when muzzles were removed, there were 32 dogs which bit 209 animals and 4 persons. The value of muzzling the dogs is clearly shown.

Failure of the Chromic Gut.—Professor Spaeth, of Vienna, performed Cæsarean section and sewed up the uterine wound with five deep and four superficial catgut stitches, largest size of Lister's antiseptic chromic acid ligature. The woman died forty-eight hours after, of peritonitis. The autopsy was surprising in its revelations. Every catgut suture in the uterine tissue was found untied and straightened out while the wound was open and gaping, the lochial discharges having escaped into the peritoneal cavity. The original knots in the catgut had been tied with especial care by Professor Weinlechner.—*Philadelphia Medical Times.*

Doctors' Signs.—The *Canadian Journal of Medical Sciences* laments the gorgeousness of doctors' signs in Toronto. A while ago a modern door-plate was all that was thought necessary. Suddenly an enterprising medico exhibited a fanlight adorned with gilt letters over his door. The horror-struck profession first protested, then endured, then embraced the new style. Of late even this has been "improved upon." "At first simply the name appeared, and perhaps the street number; now we have 'office hours,' covering immense spaces, beautifully colored, in some cases; in others a good portion of the alphabet, in capital letters, after the name. Sometimes tin plates adorn various parts of the doctors' abodes, being especially profuse about the corners of the houses and fences. Enterprise has not, however, stopped here, and we have occasionally added a street lamp, or a huge gray stone slab, fashioned after the model of a modern tombstone, and decorated with the doctor's name."

These big and glittering signs that stretch across the door and force the passer-by to look, are the mark of the tradesman. They show a lowering of professional self-respect.

As a rule, the bigger the doctor the smaller the sign—and *vice-versa*.

Sciatica.—Mr. Jonathan Hutchinson says, somewhat dogmatically, that in nineteen cases out of twenty where sciatica is diagnosed the sciatic nerve is not affected at all. The cases are simply those of rheumatic or gouty arthritis or peri-arthritis of the hip.

Lead Colic.—M. Bernutz has been experimenting at La Charité with Malherbe's method of treating lead colic, a mode of treatment resuscitated by Picot, of Bordeaux.

Thirty years ago Malherbe, basing his opinion upon a long series of cases, advocated the use of belladonna in massive doses in the treatment of lead colic. He found the tolerance for this drug was in direct proportion to the intensity of the lead poisoning. Malherbe's plan was to give five centigrammes, about gr. viii. ss., of extract belladonnæ every half hour, until twenty or twenty-five centigrammes had been given. Concurrently he gave a purgative, as two drops of croton oil.

In M. Picot's observations the cure has been prompt, the constipation being overcome after the first day, and the colic immediately calmed. M. Bernutz has had to wait longer, and in some cases was obliged the next day to recommence the treatment; occasionally there were slight signs of atropinism.—*Gaz. des Hôp.*

Mechanical Treatment of Cicatrices.—Unna has found (abstract in *Viertelj. für Derm. und Syph.*) that the cicatrices of small-pox, after ulceration, are much improved in appearance by daily rubbing with fine sand. A small sponge soaked with soap lather is dipped in the powder collected from the débris of marble, and is then steadily rubbed over the cicatrix. The resulting improvement is naturally attributed to the stimulating effect of the mechanical irritation.

Stealing Medical Advice.—It is very well known that although medical advice is made much sport of by certain of the laity, it is a practice among some to get such advice surreptitiously at an ordinary social interview whenever they can. The most innocent conversation sometimes conceals an insidious demand, or ends in a direct request for a medical opinion. One day a physician met in the street a gentleman who was accustomed to annoy him in this way. The doctor was stopped and a number of physical troubles were rehearsed. "Great heavens!" said our Æsculapius in affected alarm, "is that the case? Let me see your tongue." The would-be patient looked around suspiciously, then

opened his mouth with some reluctance. "I tell you," said the doctor, with apparent irritation, "put out your tongue. How can I make a diagnosis if I only see the tip? There, hold still! Further! Now close your eyes." The patient, conquered, shut his eyes tightly and thrust out his tongue to the utmost. The doctor stepped around the corner quick as a flash, and was troubled no more for advice *gratis*.

CARBOLIC ACID, according to Dr. Robert J. Lee, is the only antiseptic that can be volatilized in a definite and constant manner. This is a most important fact in treatment, and deserving attention. If a solution of one part of carbolic acid in eighty of water be distilled under slight pressure, the vapor will contain the same proportion of the acid as the solution during the process of boiling; so that we can obtain vapor of any strength and diffuse it in the atmosphere. Other antiseptics are often too volatile, as, for example, thymol, which comes off very rapidly from the boiling water, as does also benzoic acid, so that they are not convenient for inhaling.

FOREIGN BODIES IN THE ALIMENTARY CANAL.—Dr. T. C. Wallace, of Cambridge, N. Y., writes: "The article of Dr. Field on 'Foreign Bodies in the Alimentary Canal,' in the last number of THE RECORD, prompts me to relate the following: On the 6th inst., at 10 A.M., a gentleman living about a mile distant from this village came to my house, and with intense (but natural) anxiety informed me that a few minutes previously his little son, aged six years, had swallowed a shawl-pin. I directed him to trust the case entirely to nature, so long as no unfavorable symptoms arose, and expressly forbade the administration of any cathartic medicine. On the morning of the 9th inst. careful examination of the fæces revealed the pin. During its transit from mouth to anus there was not the slightest constitutional disturbance or unpleasant symptom. The pin was about three inches in length, its head was a black ball about the size of a large marrowfat pea, and the point very sharp."

APPROVAL OF THE NEW CODE.—At the semi-annual meeting of the Clinton County Medical Society, held at Plattsburg, N. Y., July 11th, the provisions of the new code of ethics regarding consultations were referred to a special committee, who promptly reported the following:

"*Resolved*, That we utterly repudiate the code of medical ethics adopted by the New York State Medical Society in February last."

One member inquired whether the adoption of the resolution would be followed by discipline in case the members should fail to comply with the old code.

Another inquired whether the resolution was intended to cover the whole or only part of the code.

The committee then changed the resolution so as to make it apply only to consultations. Ample opportunity was afforded for remarks; no one, however, appeared willing to advocate the adoption of the resolution.

Dr. Nichols then expressed, in strong terms, his disapproval of its provisions. He read portions of the old code having reference to consultations, and stated that this requirement was termed "*putting up the bars*," and followed by reading the section of the new code bearing on the same subject, which, he said, was called "*letting down the bars*." The doctor alleged that in former times it might have seemed necessary, for the better protection of the profession, to enact and enforce inhibitory provisions such as the old code established. He was fully convinced, however, that the intelligence and liberality of the medical men of the present day was such as to render all rules involving liberty of opinion and action unnecessary and harmful. The dark age of medicine was passing away. Medical men may now be safely allowed the utmost freedom in the matter of professional consultations.

The doctor described the operation of the medical laws in force in the Canadian Provinces, which, after a trial of twelve years, prove that the barriers embodied in the old code are worse than useless. He was proud of the New York State Medical Society, and was pleased to know that it was the first to take this bold step in defence of the right, and he for one would earnestly support the Society, and would endeavor to aid, in every way in his power, the adoption of similar liberal provisions and principles by medical associations throughout the country. The following was then proposed as a substitute for the foregoing resolution:

"*Resolved*, That we cordially approve the code of medical ethics adopted by the New York State Medical Society at its annual meeting held at Albany, February 7, 1882."

The resolution was promptly adopted by a vote of seven in the affirmative to five in the negative.

THE PROFESSORS OF OBSTETRICS IN ITALY.—Some months ago Dr. V. Balocchi, the distinguished Professor of Obstetrics at the University of Florence, died. Professor Chiara, of Milan, has been nominated in his place. Professor Porro, of Pavia, has been called to Chiara's place at Milan. Drs. Mangiagalli and Negri, who were Chiara's assistants in Milan, have been elected to the Obstetrical Professorships respectively in Sassari and Novare.

DR. MOLSON, who was associated with Dr. Ross in the editorial management of the *Canada Medical and Surgical Journal*, has resigned. His place is filled by Dr. Roddick.

THE TRI STATE MEDICAL SOCIETY of Kentucky, Illinois, and Indiana will hold its eighth annual meeting in Terre Haute, Ind., on September 26, 27, and 28, 1882.

THE SIGNIFICANCE OF CEREBRAL ASYMETRY.—Dr. Layton quotes (*N. O. Medical and Surgical Journal*) the following from J. A. Fort's "Anatomie et Dissection": "Every one knows that after the death of the celebrated Bichat, one hemisphere was discovered to be in a state of almost complete atrophy, which appeared to be by no means of recent origin. Who would venture to deny the mental capacity of the illustrious anatomist, his lively imagination, and that spirit of generalization which has immortalized his name?"

TIGHT TROUSERS AND SEXUAL HYGIENE.—That the present style of pointed shoes develop corns every one will admit, but it is reserved for Dr. John I. Ligget, in our esteemed contemporary, the *Medical Gazette*, to show that the tight pants of the period produce a constant erethysm and lead to sexual excess. It will certainly be painful for the physician, as he watches the dapper youths who promenade our Avenue, to think that they are all more or less in a state of hyper-sensitiveness as regards the reproductive parts. We hope that Dr. L. is mistaken, and think that he has probably fallen in with gentlemen who wore misfits.

THE AMERICAN PUBLIC HEALTH ASSOCIATION meets at Indianapolis in October next.

THE BRITISH NAVAL MEDICAL DEPARTMENT has furnished every sailor and marine in the expedition to Egypt with a charcoal portable filter filled with caoutchouc tubes.

SYPHILIS TREATED WITH AMMONIO-MERCURIC PEPTONE.—M. Martineau has treated six hundred syphilitic patients by subcutaneous injections of ammonio-mercuric peptone. He has made eleven thousand injections in all, and has never had any accident, neither abscess, stomatitis, salivation, or intestinal disorder.

ASSES' MILK.—Professor Parrot, on the basis of the experience of the extensive nursery of the Hospice des Enfants Assistés of Paris, considers demonstrated the superiority of asses' milk over that of other animals in the hand-feeding of infants. M. Parrot has seen this milk bring about the veritable resurrection of infants. He formulates his practical conclusions in the following propositions: In the absence of a good nurse, a milch ass is the best substitute for infants. Its sober character, the tolerance which it has of stable-life, especially also the chemical constitution of its milk, which very closely approximates to that of the mother, place it first among animals which can be utilized for artificial feeding of infants. After it come in order the mare, the goat, and the cow. A she ass in full milk can only satisfactorily nourish three infants of the average age of five months. In places where the goat can live free, and find the food which it likes, it may be substituted without inconvenience for the ass. Asses' milk should play a large part in the treatment of children's diseases. It is particularly indicated in gastro-intestinal affections. Exceptionally, it will replace with advantage the mother's milk. All public institutions destined for the maintenance of new-born children and young infants, healthy or diseased, should be provided with arrangements for keeping, in proportion to need, asses and goats.—*Brit. Med. Journal.*

DESCRIPTION OF THE TOY PISTOL.—In *Walsh's Retrospect* there appeared last summer a description of the toy pistol, with the comments of a Baltimore physician upon the cause of its destructiveness:

"This pistol is about four inches in length and explodes a blank cartridge in a metallic case, with a pasteboard or other thick paper wad, but carries no ball or shot in the cartridge. In order to insert the cartridge the breech of the barrel is raised by pressing on the finger-piece forward of the trigger; but to do this the boy takes hold of the barrel with his left hand, the muzzle pressing against the palm of the hand, near the ball of the thumb frequently, and raises the hammer with his right hand. In loading, however, unless the utmost care is exercised, the hammer slips from the finger and explodes the cartridge, while the barrel is held against the palm of the left hand. The fulminating powder, the wad, or the metallic case of the cartridge inflicts the wound, which is often so slight that a physician is not called in, even if the boy does not, Spartan like, conceal his wounds from his parents, until he is past relief."

Dr. N. H. Clendinen, extracted from the palm of a boy a thick pasteboard wad which had been driven there by a toy pistol. The hand was much swollen, and had been poulticed and otherwise treated in vain, until the wad was removed. Dr. Clendinen thinks that the wad is the cause of most of the cases of tetanus that have occurred from these wounds. Yet the profession in Baltimore are divided in opinion regarding the cause; some suspect the fulminating powder used in the manufacture of the cartridges, and others that atmospheric conditions have some unfavorable effect upon the wounds. In one fatal case the wound was only a slight abrasion of the skin.

DEATH OF DR. JOHN B. LEAL.—We regret to announce the death of Dr. John B. Leal, an eminent physician of Paterson, N. J. Dr. Leal was born in Delhi, Del., in 1827. He graduated in medicine at Pittsfield, Mass. He was surgeon in the Union army during the war of the rebellion, and there did excellent service, being at one time Medical Director in the Department of the South. Dr. Leal came to Paterson in 1867, and lived there during the remainder of his life. He was very highly esteemed by the public and profession of that city.

LAWN TENNIS ARM.—For this affection a correspondent of the *Lancet* recommends chaulmoogra oil carefully rubbed into the arm night and morning. This oil, he states, is now generally used by men after their first day's hunting, and also by bicyclists after their first day's long ride, because they find that it entirely prevents any irritation of the skin or stiffness if it is well rubbed in before they retire to bed.

ACUTE CONJUNCTIVITIS CAUSED BY THE ELECTRIC LIGHT.—Dr. W. C. Rockliffe reports in the *Lancet* the case of a man, aged twenty-eight, who was accustomed daily to adjust the carbon points of a 3,000 candle-power electric light. He did not use colored glasses, and stated that every day for a quarter of an hour there was dimness of vision after the lighting. On one occasion, after regaining vision as usual, he felt pain, lachrymation, rapidly increasing photophobia. During the night he suffered intense agony. By the next day there was a fully developed conjunctivitis.

THE DIMINUTION IN MORTALITY AFTER AMPUTATIONS during late years is shown by statistics of the Glasgow Royal Infirmary, recently published in the *Lancet* by Dr. M. Thomas. The per cent. of mortality given by Sir James Simpson as existing previous to 1869 was 39.1. Since 1868, the average mortality has been 25.5 per cent., or 212 deaths in 822 operations.

The decrease in the case of the four major amputations is shown by the following table:

Thigh cases, 380; deaths, 113; mortality, 29.7 per cent. against 46.2 per cent. previous to 1868. Leg cases, 182; deaths, 54; mortality, 29.6 against 44.0. Arm cases, 167; deaths, 33; mortality, 19.7 against 35.4. Forearm cases, 93; deaths, 12; mortality, 12.9 against 11.7.

There has been an increase of 19 per cent. in the annual number of operations. The mortality cannot be reduced to that of country cottage hospitals because such bad cases are sent in for operation.

A MOLECULE OF WATER, according to Dr. Heen, measures in diameter 0.000,000,075 millimetre. A drop of water measuring one cubic millimetre would contain twenty-five trillions of molecules.

THE CHEMICAL CAUSE OF LIFE.—Up to within a few years physiology did not suspect that there was any chemical difference between dead and living protoplasm. Many still will say there is none. But re-

cent researches, beginning with an article of Pflüger's in 1875, point strongly in an opposite direction. One of the ablest essays in the affirmative was written last year by Dr. Oscar Loew and Dr. Bokorny, and published in Munich. The result of their investigation goes to show that living protoplasm owes its property of life to the presence of aldehyde groups which are characterized by intensely active atomic movement. When death takes place it is coeval with and caused by a transformation of these aldehyde groups into amyd groups, with diminished molecular motion, thus leading to cessation of action.—*Medical Press.*

Appointments in Harvard Medical College.—At the annual meeting of the Board of Overseers of Harvard University, September 13, 1882, Dr. David William Cheever was appointed Professor of Surgery; Dr. Charles P. Lyman, Professor of Veterinary Medicine.

The Yellow Fever Epidemic.—The following is a summary of the progress of the yellow fever at Brownsville during the week ending September 16th, furnished by the Surgeon-General, Marine Hospital Service, compiled from official reports:

Date.	Cases.	Deaths.
September 10	58	None.
September 11	47	1
September 12	31	3
September 13	32	None.
September 14	24	None.
September 15	18	2
September 16	22	None.
Total	232	6
Previously reported	1,539	88
Grand total, to include Sept. 16.	1,771	94

Since September 16th, the average daily number has continued to be less than it was a week ago.

Official reports from Pensacola have been received by the Surgeon-General up to and including September 12th, as follows:

Date.	Cases.	Deaths.
August 28	9	1
August 29	2	None.
August 30	3	1
August 31	4	None.
September 1	1	2
September 2	None.	1
September 3	None.	None.
September 4	1	2
September 5	1	None.
September 6	None.	1
September 7	13	None.
September 8	12	2
September 9	16	2
September 10	10	2
September 11	20	3
September 12	22	2
Total during epidemic	114	19

Since the twelfth, the number of cases has kept at about twenty daily. On the eighteenth, the number was twenty-seven, and the prospects were bad. The deaths, however, have been few.

Poisoning of an Infant.—Dr. G. Frank Lydston, of Chicago, writes: "I notice in The Record of September 2d a remarkable case of fatal poisoning in an infant as a result of the administration of a single drop of laudanum, and it suggests to me a case of my own, in which I very nearly experienced a similar accident. The case was that of an infant, about a week old, born at the Charity Hospital, New York. The nurse called my attention to the fact that the stools of the child contained a quantity of blood, which began to appear in slight amount and gradually increased. As the child had had some diarrhœa, I concluded that the trouble was of a dysenteric nature, and accordingly gave the child a drop of tr. opii with two drops of castor-oil, with the result of producing the symptoms of opium-poisoning to a marked degree, the surface being cold, the pulse feeble, and respiration very slow and shallow. The pupils were contracted and the child comatose, being aroused with difficulty. By slapping the surface smartly, and the free use of the cold douche, I succeeded, after a hard night's work, in restoring the infant. The experience gained was very valuable, as it served to impress me very forcibly with a point with which I was already familiar, viz., the marked intolerance of children for opium. The most singular feature of the case is, that upon careful examination—the diarrhœa having stopped and the hemorrhage still persisting—I found the source of the bleeding to be the vagina. There was no lesion visible, but the vaginal mucous membrane was considerably congested. The hemorrhage persisted for four days, and then ceased as gradually as it began. The child seemed otherwise perfectly healthy. The blood had one peculiar quality, in that it showed no disposition to clot, resembling in that respect normal menstrual blood. There were no evidences of precocious development. I attempted to detain the child for a time, but it was removed from the hospital, and I could learn nothing of its subsequent history."

A New Veterinary School will be opened in Harvard University this fall. The regular course of the veterinary students will be three years. The subsidiary branches to be studied by the veterinary aspirant are taught in the other departments of the university, while preparations will be made for the theoretical and practical instruction in the veterinary art.

Multiple Sarcoma of the Skin.—A case of this very rare disease occurred in Neumann's clinic at Vienna lately. It is described by a correspondent of the *Maryland Medical Journal.* A Russian Jew, aged thirty-four, and apparently in excellent health, appeared, having on his abdomen an erythema which upon further investigation was found to be lumpy. His abdomen looked as if covered with large varicose veins. Upon turning him around, under the right scapular, there was a half-moon shaped tumor, about the size of a large watch, raised above the surface of the skin an eighth of an inch. There was no ulceration. The color was a light brown, and the surface had the appearance of normal skin when viewed under a magnifying glass. This was the only tumor projecting above the skin. Various lumps could be felt on the abdomen, which were quite hard and varving in size. The disease was seven years old. Leprosy, syphilis, and sarcoma cutis, were the three possible diseases, and as the two former were excluded, both Neumann and Kaposi settled upon the latter, making a diagnosis of multiple sarcoma of the skin. Such cases are very rare, Neumann only having seen three in the course of his large experience.

Original Communications.

CUTANEOUS IRRITATION AND THE PULSE.[1]

By SARAH E. POST, M.D.,
NEW YORK.

The following memoranda record an effect of general cutaneous faradization. The patient having been disrobed, enveloped in blankets, and in the recumbent position, application was made to each posterior lateral half, and last to the anterior surface of the body.

The electrodes used were the brush and the curved plate, figured in The Record, p. 724, June 25, 1881. The warmed plate was apposed to a part of slight sensibility, usually some portion of the thigh, while the brush, with a short but deliberate motion, was passed forward and backward over the regions indicated, force enough being used to thoroughly redden the skin. The electrodes were not moistened. The skin was dry but not powdered. The motion of the brush was accompanied by a low-pitched humming sound. The duration of the application varied between fifteen and forty-five minutes. The current was stronger than that usually employed for the production of contractions, never, however, being sufficiently strong to cause pain.

The principal precaution was the avoidance of shock. We did not attack too precipitately a painful or sensitive point, but hovered in its neighborhood, or passed the brush over it quickly and in one direction until thorough counter-irritation could be comfortably borne.

The patient did not talk during the application, and did not watch the process while the record was being made.

In general terms, where the slowing amounted to seven per cent. drowsiness usually appeared, the face would become pale, and the hands and feet would become warm. With these symptoms coexisted a general tonic effect.

Case I.—Lady, thirty-five years of age, 160 pounds. Has cold feet, erythematous blotches over body and limbs. Mental depression marked.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	72	64	9	72	62
2	72	68	10	64	68
3	68	64	11	68	72
4	68	64	12	78	68
5	72	70	13	72	64
6	70	64	14	68	64
7	64	62	15	72	72
8	78	68	16	64	68

Average pulse, 70.
Average slowing equals 4.45 per cent.

Case II.—Lady, fifty-five years of age, 180 pounds. Had typhoid fever several months previous. Complains of muscular weakness and indigestion.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	78	68	7	68	64
2	80	70	8	72	66
3	60	66	9	68	64
4	74	68	10	60	64
5	66	60	11	72	64
6	64	64			

Average pulse, 69.
Average slowing equals 5.77 per cent.

Case III.—Lady, thirty-five years of age, 190 pounds. Has flushed face, aching in sub-occipital region, tenderness over cervical spines, erratic pains, insomnia, and dyspepsia.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	78	74	8	78	72
2	76	82	9	76	68
3	76	70	10	72	62
4	76	70	11	76	68
5	80	64	12	72	64
6	72	68	13	76	70
7	80	70	14	92	78

Average pulse, 77.
Average slowing equals 9.44 per cent.

Case IV.—Lady, thirty-five years of age, 200 pounds. Has anæmia, with gastric discomfort and extreme muscular weakness.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	80	76	7	76	66
2	84	74	8	84	66
3	80	74	9	72	64
4	82	74	10	88	78
5	92	80	11	88	68*
6	88	78			

* Faradism combined with massage was followed by exhaustion, which did not induce sleep, and which persisted for twenty four hours.

Average pulse, 83.
Average slowing equals 11.62 per cent.

Case V.—Lady, sixty-eight years old; emaciated, chronic invalid. Has obstructed portal circulation with frequent hemorrhages from stomach and bowels.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	88	78	3	88	80
2	88	78	4	84	80

Average pulse, 87.
Average slowing equals 8.93 per cent.

[1] Thesis defended before the Woman's Medical College of the New York Infirmary, at its Commencement exercises, June 1, 1882.

CASE VI.—Boy, seventeen years of age. Vitiligo.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	62	56	7	60	60
2	62	60	8	60	58
3	64	62	9	64	58
4	58	54	10	58	64
5	64	64	11	58	64
6	58	50	12	62	56

Average pulse, 61.
Average slowing equals 3.30 per cent.

CASE VII.—Lady, forty-five years of age, in good health.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	76	68	5	64	58
2	62	56	6	72	62
3	66	60	7	64	62
4	64	64			

Average pulse, 67.
Average slowing equals 8.54 per cent.

CASE VIII.—Lady, thirty years of age; overworked and anæmic.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	50	52	4	66	74
2	70	60	5	66	62
3	60	56	6	66	60

Average pulse, 63.
Average slowing equals 3.70 per cent.

CASE IX.—Lady, thirty-two years of age. Has phantom abdominal tumor and general hysterical symptoms.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	106	82	3	92	80
2	88	80			

Average pulse, 95.
Average slowing equals 15.62 per cent.

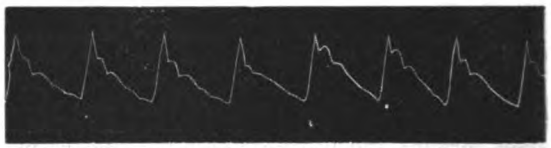
CASE X.—Lady, sixty years of age; of active habits and in good health.

Observation.	Pulse before.	Pulse after.	Observation.	Pulse before.	Pulse after.
1	68	64	6	66	54
2	65	52	7	64	52
3	66	62	8	72	64
4	72	60	9	66	60
5	68	62	10	54	52

Average pulse, 66.
Average slowing equals 11.80 per cent.

The total average slowing amounts to 8.31 per cent. of the primary count.

To determine changes in character, the radial pulse was sphygmographed in four cases before and at the end of the application, also at the end of the separate periods devoted to the back, to the limbs, and to the abdomen. At the end of the application, in two increased, in one decreased, and in one case unaltered arterial tension was obtained. The increased number of observations showed in the two cases increased tension, also after the application to the back; a diminished tension after the application to the limbs, and again an increase after the application to the abdomen, changes which are registered in Traces 1 to 4.



No. 1.—Pressure 12; taken before the application.

No. 2.—Pressure 12; after application to back.

No. 3.—Pressure 12; after application to limbs.[1]

No. 4.—Pressure 10; after application to abdomen.

The case which presented the diminished tension at the end of the application showed also after the application to the back increased tension, which was soon lost, and did not reappear during the subsequent stages of the treatment. It may be remarked that the former two cases were spare women, while the latter were corpulent with an especially deep deposit of fat in the abdominal walls. The remaining case with a diminished frequency, amounting to 12 per cent., showed, at the end of the separate periods, only so slight alteration in the character of the pulse as might be due to a modified adjustment of the instrument. So long a time, however, intervened between the observations that a very rapid reaction might easily have escaped unnoted.

In general terms increased tension was observed after applications to the back and to the abdomen, a fall or unaltered tension being present in each case after application to the limbs.

To determine the relation between these condi-

[1] Pond's sphygmograph was used. This instrument propels the card at a rate of about one inch in three seconds.

tions and the one previously noted, observations were made with the following result:

Case.	Pulse before app.	After app. to back.	After app. to limbs.	After app. to abdomen.
3.....	72	84	84	76
7.....	64	60	64	66
8.....	70	64	64	66
9.....	92	80	80	80
10.....	54	52	52	52

It will be seen that in five unselected cases the slowing had place only during periods when the rise in pressure is most apt to occur.

Concerning the mechanism of these phenomena, slowing of the pulse under the circumstances noted might be considered due to the enforced quietude or to the supine position; the patients were, however, recumbent several minutes previous to the first count, the original pulse was, in the majority of cases, not rapid, while from the simple subsidence of excitement the peculiar modifications in character would not have occurred.

Stimulation of a sensitive nerve may by direct reflection slow the heart. Such slowing is obtained from crushing the foot or touching the inflamed peritoneum of the frog.[1]

In the cases before us, however, the sensory impulse was agreeable to the patient, while in the instances quoted slowing was the concomitant of severe pain.

By exclusion and from the coincidence in the time of their production we consider the increased blood-pressure itself the sufficient[2] and probable cause for the diminished frequency of the heart. With regard to the method of its action, Marcy has supposed the heart to beat the more slowly as it has the greater difficulty in emptying itself.[3] Loaded muscle, however, contracts with the greater energy[4] while the excised heart of the frog beats the more rapidly with increase of endocardial pressure.[5]

Bernstein observed the slowing to be absent if the vagi had been previously divided,[6] and hence supposes it to be due to an impulse travelling that nerve—a conclusion supported by a number of other investigators.

Francois Franck has obtained slowing from an increased pressure which affected the brain alone.[7]

The increased pressure is supposed to be due to increased general or local arterial tone. Dr. Ott has said that all of the arteries of the body are contracted excepting those of the surface irritated.[8] This conclusion is not universally true. Dr. Brown-Séquard obtained from pinching one hand contraction of the vessels in only the opposing limb.[9] Similar observations have been made by Van der Beke Callenfels upon the rabbit,[10] and by Dr. Putnam upon the frog.[11]

A limited reflex is assumed in the cases before us from the coincidently warmed extremities. Heidenhain, with a similar result, supposes the vessels of the skin to have been relaxed and the contraction to have occurred in internal organs with the effect of an outward wave.[12]

To consider the slowing produced by the increased pressure explains also the coincident drowsiness, according to Dr. Jewell's theory, that sleep may be induced by a sudden change in the circulation of the brain;[13] also, the occurrence of the sleep in some cases during the application, and in others at its end, is accounted for as the increased or the diminished pressure is its determining cause.

That applications which produce a considerable slowing of the pulse have a general tonic effect has been referred to. A similar relation has been noted by other observers. Dr. Putnam-Jacobi has associated the benefit of massage and the cold pack with the slowing of the pulse which they produce.[14]

Drs. Beard and Rockwell have indicated the same coincidence by an expressive phrase, "the tonic and sedative effect."[15]

Massage and the cold pack cause also increased elimination of urea,[16] indicating increased destruction of circulating albumen or increased appropriation of food.[17]

Similar mild irritants, as salt baths, etc., cause increased elimination of CO_2, with also a nutritive influence shown by an immediately increased consumption of oxygen.[18]

These results, immediate and remote, with their relation to the slowed pulse, would a few years ago have been explained by the agency of the conditions which I have placed before you in this essay. Increased blood-pressure, with its increased rapidity of current, being supposed to increase the supply of oxygen, which in its turn determined the metamorphoses of the body.

Pflüger and his pupils, however, most emphatically deny this agency. Pettenkofer and Voit also find the quantity of the excretions quite independent of the coincident supply of oxygen.[19]

Pflüger says, "The regulation of the supply of oxygen consumed is determined by the cells themselves, not by the oxygen capacity of the blood, not by the tension of the aortic system, not by the swiftness of the current, not by the character of the heart's action, and not by the character of the respiration."[20]

Roehrig and Zuntz find O and CO_2 diminished by a dose of curare insufficient to affect either the respiration or the pulse, and hence suppose nutrition to be controlled by special nerves, which run in the motor paths.[21]

Dr. Ott has obtained also hypnotic and other phenomena which cannot be explained by the circulatory conditions.[22]

In deference to these deductions after having allowed for the influence of sleep, for the influence of the improved function of the skin, for the influence of the dissipated stasis in internal parts, and for the influence of an increased nutritive supply,[23] we may suppose that our cutaneous irritant

[1] Foster's Physiology, p. 174. 1879.
[2] Hermann's Handbuch der Physiologie, Bd. iv., Th. 1, S. 397.
[3] Marcy: La Circulation du Sang, p. 334. 1881.
[4] Foster's Physiology, p. 81.
[5] Hermann's Hdb. der Phys., Bd. iv., Th. 1, S. 373.
[6] Bernstein: Centralblatt f. d. Med. Wiss., S. 1. 1867.
[7] Francois Franck: Travaux du Lab. de Marcy, iii., 293.
[8] Isaac Ott: Journal of Nervous and Mental Diseases, p. 581. 1881.
[9] Brown-Séquard: Archives de Phys., p. 688. 1868.
[10] Zeitschrift für Rat. Med., p. 157. 1855.
[11] Putnam: N. Y. MEDICAL RECORD, August 28, 1880, p. 241.
[12] Heidenhain: Pflüger's Archives, Bd. iii., S. 504.
[13] Jewell: Journal of Nervous and Mental Diseases, April, 1880.
[14] Dr. Putnam-Jacobi: Seguin's Archives, iv., p. 55.
[15] Beard and Rockwell: Med. and Surg. Electricity.
[16] Putnam-Jacobi: Seguin's Archives, iii., p. 296. 1880.
[17] Voit: Hermann's Hdb. der Phys., Bd. vi., Th. i., S. 300.
[18] Roehrig and Zuntz: Pflüger's Archives, Bd. iv., S. 57. Paalzow: Pflüger's Archives, Bd. iv., S. 492.
[19] Voit: Hermann's Hdb. der Phys., Bd. vi., Th. i., S. 279.
[20] Pflüger: Archives, Bd. vi., S. 52.
[21] Roehrig and Zuntz: The same.
[22] Isaac Ott: The same.
[23] Hermann's Hdb. der Phys., Bd. vi., S. 311.

affected reflexly not only the vascular, but other systems of nerves.

Dr. Naumann, in 1863, proposed the effect of cutaneous irritants upon the pulse, as a basis for their classification, dividing them into the comparatively mild, or those producing a "hypersthenic" effect, and the painfully strong or those producing a "hyposthenic" effect.[1] With the former he obtained an increase in the arterial blood-pressure, with an increased frequency and force of the heart. With the latter a diminished pressure and a diminished frequency, averaging 4 per cent., preceded by an increase in both, the location of the application being immaterial to the result.

Drs. Nothnagel and Rossbach accept this classification in a late edition of their therapeutical work.[2]

The authors then assign our ordinary counter-irritating agents to this second class, mustard and cantharides heading the list.

Now it has occurred to me to have from applications more than usually severe cutis anserina, with the acceleration of which these gentlemen speak, a relation which requires the existence of a grade of irritant milder than either with which Dr. Naumann experimented, yet possessed of marked hæmodynamic influence.

Acceleration and increased pressure are considered independent when produced by peripheral stimulation.[3] To exclude the former has been my effort in these experiments. That we are able to entirely avoid acceleration while increasing blood-pressure from a cutaneous irritant, I am not fully assured. To demonstrate the fact would require a continuously running graphic apparatus. Its minimum, however, appears to depend upon the skill of the operator in the avoidance of shock.

The warmed electrodes also have in this connection their recommendation and their defence.

Further, the rise in blood-pressure is greater and more constant from tactile irritation of the skin than from that which would produce pain.[4]

To avoid abruptness and unpleasant severity is therefore essential, both for the exclusion of acceleration and for the production of the increased pressure which determines the diminished frequency of the heart.

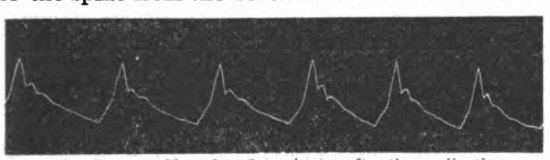
In recapitulation it is submitted to you:

First.—That we have obtained a diminished frequency, which occurs in the case of the already slow, as well as in that of the previously rapid pulse.

Second.—That this diminished frequency is a result of increased arterial blood-pressure, determined by the reflection of a stimulus to cutaneous nerves.

Third.—That the stimulus which produced it is milder than that necessary permanently to excite the pulse.

The following sphygmographic traces record an effect of mustard. To Case X. a plaster three inches broad was applied over and equally upon each side of the spine from the seventh cervical to the tenth dorsal vertebra. Trace 6 shows at the end of ten minutes, by the additional pressure necessary for its development and by the increased prominence of the tidal wave, increased tension, Trace 7 diminished tension, and Trace 8, at the end of twenty minutes, again an increase which gradually subsided. At the end of thirty-five minutes the plaster was removed.

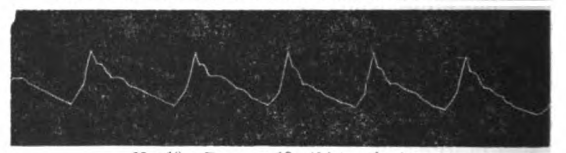


No. 5.—Pressure 10; taken five minutes after the application.

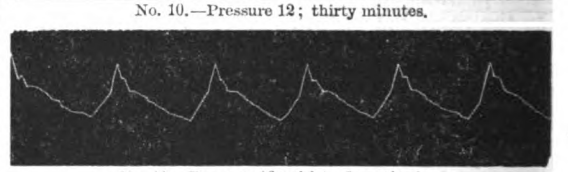
No. 6.—Pressure 14; at the end of ten minutes.

No. 7.—Pressure 10; fifteen minutes.

No. 9.—Pressure 12; twenty-five minutes; patient asleep.



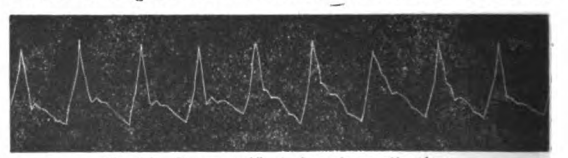
No. 10.—Pressure 12; thirty minutes.



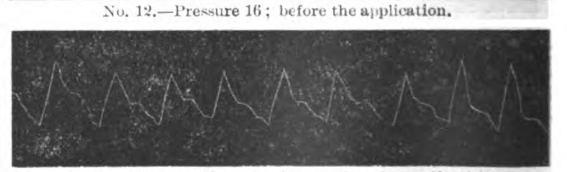
No. 11.—Pressure 12; thirty-five minutes.

As compared with the Traces which immediately precede, diminished frequency may be detected in Trace 7 and in Trace 9, while Trace 8, which shows the most marked tension shows also acceleration of the pulse. Drowsiness occurred as from the faradic brush. Trace 9 was taken while the patient was asleep. It is incidentally of interest that upon the removal of the paste the subject remarked, "It again burns." Again the instrument registered increased tension and again the patient slept.

The next application was similar, and made to a healthy young woman of twenty-four years. Its effect is registered in Traces 12 to 24. An acne

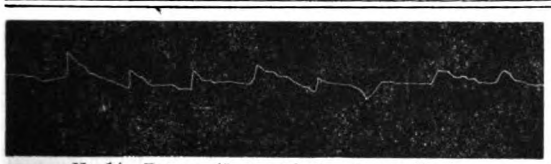


No. 12.—Pressure 16; before the application.



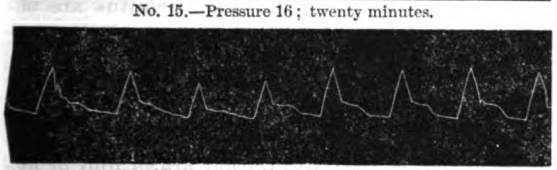
No. 13.—Pressure 16; five minutes after the application.

[1] Naumann: Vierteljahrschrift für Prakt. Heilkunde, 1863, Th. 1, S. 7; 1867, Th. 1, S. 133.
[2] Handbuch der Arzeneimittellehre, 1880, S. 514.
[3] Hermann's Hdb. der Phys., Bd. iv., Th. 1, S. 392.
[4] Ibid., S. 431. Heidenhain: Pflüger's Archives, Bd. xvi., S. 47.

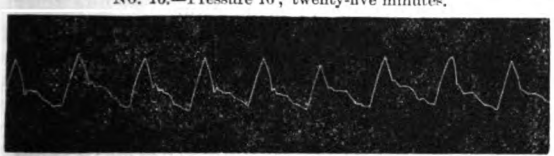


No. 14.—Pressure 10; ten minutes after application.

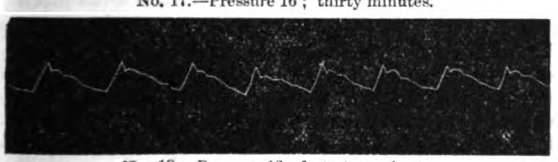
No. 15.—Pressure 16; twenty minutes.



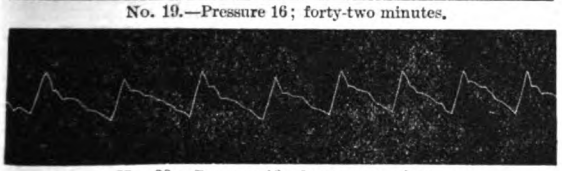
No. 16.—Pressure 16; twenty-five minutes.



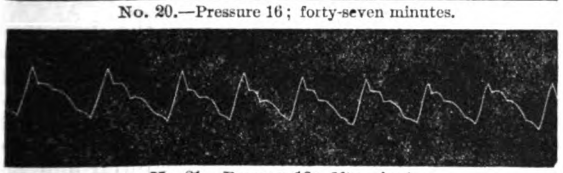
No. 17.—Pressure 16; thirty minutes.



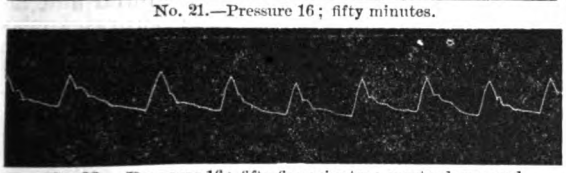
No. 19.—Pressure 16; forty-two minutes.



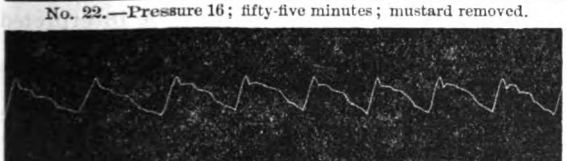
No. 20.—Pressure 16; forty-seven minutes.



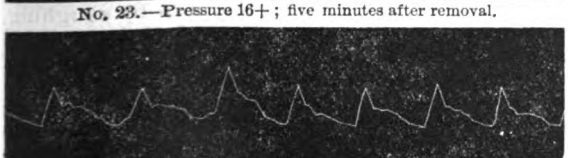
No. 21.—Pressure 16; fifty minutes.



No. 22.—Pressure 16; fifty-five minutes; mustard removed.



No. 23.—Pressure 16+; five minutes after removal.



No. 24.—Pressure 16; ten minutes after removal.

pustule upon the part caused an immediate and severe burning pain. Four periods of increased tension may be discerned, one shown in Trace 15, one rising in Trace 17, reaching its maximum in Trace 18, and subsiding in Traces 19 and 20; another in Trace 21, and again another, upon the removal of the paste, is shown in Trace 23. Upon myself these periods of increased tension coincided with distinct periods of burning when a new focus of irritation would appear to be set up.

Comparative slowing may be found in Traces 14, 16, 20, 22, and 24, while the increased tension was in each instance clearly accompanied by acceleration of the pulse.

The mustard used was of the commercial variety, was mixed with vinegar, and was not retained longer than could with equanimity be borne.

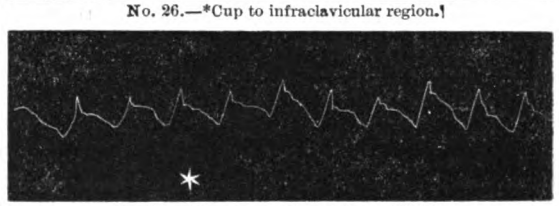
The redness was marked and in both cases persisted for several days. In Case XI. complete desquamation of the epidermis occurred.

In the foregoing diagrams we have increased pressure with acceleration followed by diminished pressure with diminished frequency and somewhat diminished force of the heart. This is Dr. Naumann's description of his hyposthenic effect, yet the irritant which produced this result, while more severe than the faradism previously employed, is yet milder than that which produces permanent acceleration of the pulse. From increasing its strength beyond the point of tolerance wildly excited heart's action occurred.

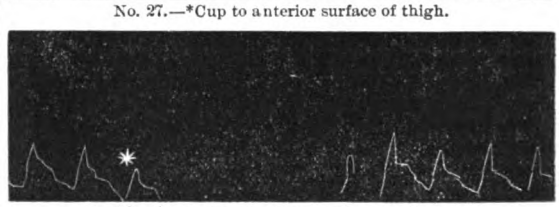
The remaining Traces register an effect of dry cups, upon Case XI., two weeks after the preceding experiment. At the instant indicated in Trace 25,

No. 25.—*Cup to interscapular region.

No. 26.—*Cup to infraclavicular region.



No. 27.—*Cup to anterior surface of thigh.



No. 28.—*Cup to back after previous applications.

an application was made to the right interscapular region, as indicated in Trace 26, to the right in-

fraclavicular region, and, as indicated in Trace 27, to the anterior surface of the thigh.

An immediate rise in tension is indicated with the application to the back and to the chest, while that to the limbs produced no perceptible change.

Trace 28 records the effect of the same application to the back at the end of the same sitting, six or eight cups having been previously applied. It will be seen that a fall, instead of a rise in arterial blood-pressure occurred. This effect is similar to that obtained from the prolonged stimulation of a sensitive trunk.[1]

Slight acceleration coincident with the increased tension may be seen; while in another case from cups to the spine repeatedly resulted pallor and drowsiness similar to that from the faradic brush.

113 East Thirty-first Street.

BRONCHITIS AND INTERPLEURAL PLASTIC EXUDATION.

By D. M. CAMMANN, M.D.,

late attending physician to new york dispensary (heart and lungs).

It is probable that many cases of plastic exudation within the pleural are diagnosed and treated as cases of bronchitis. In the following paper it is my purpose to consider some of the signs which will assist in the differentiating of the two diseases. The correct interpretation of the physical signs in these cases is of such importance as regards treatment that the differential diagnosis should be carefully studied. On the one hand, those cases treated for bronchitis may have fresh exudation of plastic matter from time to time which becomes organized, contracts, binds the lung to the chest-wall, and ends in fibroid or tubercular phthisis. On the other hand, in the majority of the cases properly treated, the plastic matter will be absorbed, or, if absorption does not occur, the patient may be put in the best condition to avoid danger from old, and to guard against the approach of new adhesions.

Many cases of acute bronchitis cannot be recognized by the physical signs. Respiration is normal, and there are no râles. These cases can usually be diagnosed from the history. The patient says he has taken cold, or the case may have begun with a sore throat, and the inflammation extended to the bronchi. Cough is more or less troublesome; the expectoration is mucous or muco-purulent; the temperature is a degree or two above normal; the patient does not look or feel very sick.

In other cases the respiration is modified. The bronchial element of the respiratory sound is exaggerated, and the respiration is harsh. This harshness is most marked in inspiration, but may also be observed with expiration of less intensity and lower pitch. It is most evident where the bronchi most nearly approach the chest-wall, or where the chest-wall is thinnest, as in the interscapular or the infrascapular regions. The most careful search at each examination may fail to discover râles. The percussion note is normal.

In a third class of cases râles and rhonchi are present, and it is in these cases that the greatest care is requisite to reach a correct diagnosis. Bronchitis may alone be present, or it may be accompanied by plastic exudation, or plastic exudation may have been the initial lesion and be accompanied by a bronchorrhœa.

Coarse and sibilant and sonorous râles and rhonchi may be heard. One or all of these râles are present, and they may be few and scattered over the chest, or confined to certain regions, or change from place to place, or they may be abundant over both lungs. They are more or less distant from the ear, and, unless very abundant, usually change position or disappear on violent coughing. The respiration may be harsh, or occasionally the abundance of the râles and rhonchi will somewhat obscure the respiration.

The percussion note and vocal fremitus are unchanged. A small proportion only of all cases of bronchitis come under this class.

I am satisfied, after examining a large number of cases, that, after excluding cases of plastic exudation within the pleura, the number of cases in which there are no physical signs, or in which the only physical sign is harsh respiration, are as four or five to one, or in even larger proportion.

The physical signs of chronic are the same as of acute bronchitis. As a clinical fact, however, we rarely have chronic bronchitis uncomplicated with plastic exudation. The sympathy between the bronchi and pleuræ is intimate, and a morbid condition of the one frequently induces a morbid change in the other.

Having briefly reviewed the physical signs of bronchitis, the differential diagnosis from plastic exudation may be properly considered, and it may not be inappropriate in this connection to give some cases of the latter morbid condition when the difference between the two diseases may be clearly understood by contrasting cases of each.

The examinations were made by Dr. J. R. Leaming.

Case I.—Mr. L——. In the right infraclavicular region a shower of small râles are heard in inspiration, and this condition is still more marked below. Toward the mediastinum a few distant râles are heard.

In the left infraclavicular region the broncho-respiratory murmur is harsh and expiration prolonged. The motion of the heart is restrained, and a few dry râles are heard in inspiration and expiration. The pericardium is bound to the lung and chest-wall. Over the left side, behind, the lung fills well. Râles are heard in the suprascapular and interscapular regions. In the right suprascapular region the lung does not fill as well as on the left side. Expiration is prolonged, and râles are heard in inspiration and expiration. In the interscapular space loud râles are heard. Over the lower portion of the lung some râles are heard and the motion of the lung is restrained.

The physical signs in this case may be interpreted to mean that pretty extensive interpleural plastic exudation existed, and that such an interpretation is correct has been shown by post mortem examinations[1] in similar cases on man and animals. The shower of small râles heard in front were proved to be interpleural by being directly under the ear. Such râles are not changed in position by coughing, and although they may vary somewhat in position and character from day to day by the absorption of old, and the exudation of fresh plastic matter, and by the adhesions becoming drier or moister, they

[1] Hermann's Hdb. der Phys., Bd. iv., Th. 1, S. 4.

[1] Vide Physical Signs of Interpleural Pathological Processes, by Dr. J. R. Leaming, Medical Record; and Endemic Pleuro-Pneumonia, by Dr. Leaming, Medical Gazette, February 7, 1880.

often remain without change for a considerable time. The râles heard along the mediastinum were due to exudation on the mediastinal pleura. They were more or less distant, but followed the course of the mediastinum and were not altered in position or character by coughing. In this case bronchorrhœa existed from the interference to the circulation caused by the pleurisy, and the harsh respiration may have been partly due to this and partly to the better conveyance of the bronchial sound by the adhesions between the costal and pulmonary pleuræ. Prolonged expiration may be caused by loss of resiliency of lung-tissue or by mechanical obstruction. Now, the mechanical obstruction of plastic exudation is probably sufficient to account for the prolonged expiration in this case. The dry râles heard over the heart were due to old adhesions. When adhesions are old and dry the râles become dry and creaking, or leathery. Over the right lung, behind, the signs of pleuritic exudation were evident; the râles superficial and always in the same position; the prolonged expiration and the restrained action of the lung, the lower border varying little in position with respiration.

In the next case, on a previous examination, to the one recorded, extensive plastic exudation was found on the right side and to a less extent on the left side, but up to that time there had been no cough. This has been noted in other cases, and as cough is a symptom of bronchitis, its absence may sometimes assist in forming a differential diagnosis.

Case II.—Mr. B——. In right infraclavicular region respiration is harsh and divided by heart-beat; slight leather-creaking râles in inspiration and expiration; harsh râles on coughing; percussion note flattened and raised in pitch. In the mammary region some soft râles, distant from the ear, and harsh respiration are heard; the lower portion of the lung is restrained, and at end of inspiration and beginning of expiration are creaking râles. In right suprascapular region inspiration and expiration are a little harsh, and the true respiratory murmur is scarcely heard. In interscapular space respiration is harsh and expiration a little prolonged, and dry râles are heard.

In the infrascapular region the lung is free and respiration good. Over the right side, behind, the percussion note is raised in pitch. On the left infraclavicular region the respiration is good. Below the heart the lung is restrained and the respiration interrupted. Over the left suprascapular region soft râles are heard. The respiration and percussion note are good.

The interruptions to the respiration in this case were synchronous with the movements of the heart, and were probably due to adhesions between the pericardium and pleura, which, stretched and relaxed by the contraction and relaxation of the heart, produced cog-wheel respiration at this point. The leather-creaking râles were caused by the presence of old adhesions, as were those also heard over the lower part of the lung. The flattening of the percussion note in the right infraclavicular region was due to thickened pleura. The feeble, true respiratory murmur in the right suprascapular region indicated interference with the free expansion of the lung, and was due to confinement of the lung by pleuritic adhesions, or to the lung itself having become involved. The raised pitch of the percussion note on the right side. behind, was evidently due to thickened pleura. The soft râles heard in front and behind were due either to fresh adhesions or to the moistening of old adhesions.

Case III.—Mr. E——. In right infraclavicular region there are creaking and râles and restrained motion. Beyond the interpleural complications true respiratory murmur is heard. To outer side of mammary region there is a little sibilus in inspiration and expiration. The lung is restrained at the lower part. In the left infraclavicular region the true respiratory murmur is feeble. Hard and dry râles are heard in this region, along the mediastinum in the mammary region, at outer side of mammary region, and over lower part of the lung. Percussion note under the right clavicle is flattened; on the left side it is flattened and a little more raised in pitch than on the right. In left suprascapular region tearing and creaking noises are heard at the end of inspiration. True respiratory and broncho-respiratory murmurs are heard. In interscapular region râles are heard. Lung a little freer than in front. In infrascapular region more movement than in front; cog-wheel respiration. In right suprascapular and interscapular regions râles are heard in inspiration, musical in the beginning and tearing at the end. Motion of lung near the base limited. Percussion note in right suprascapular region somewhat flat.

In this case the raised pitch of the percussion note and the creaking and râles heard with the respiration showed the presence of the thickened pleura and old pleuritic adhesions; but the true respiratory murmur clearly heard beyond the pleuritic exudation gave evidence that the lung was not yet involved. The presence in the right suprascapular and interscapular regions of râles, musical in the beginning, as the adhesions were put on the stretch, and tearing at the end, is an interesting fact.

Many more cases might be taken from my note-book, but it is perhaps unnecessary to do more than conclude with a synopsis of the physical signs of bronchitis and interpleural plastic exudation.

In bronchitis there may be no physical signs, no harsh respiration,[1] or coarse, sibilant, and sonorous râles. Sibilant and sonorous râles are almost always interbronchial. Coarse râles, when interbronchial, are distant from the ear, and change position from time to time. The percussion note is not raised in pitch and vocal resonance is not increased.

In interpleural plastic exudation there may be crepitant, subcrepitant, coarse, large gurgling, soft tearing, harsh and creaking râles and rhonchi. Fine râles are always interpleural; coarse râles, when interpleural, are directly under the ear and do not change position. Pleuritic râles disappear from extreme stretching of adhesions, from the exudation of fresh plastic matter binding the lung to the chest-wall and preventing motion, or from the rapid absorption of the plastic material. The respiration may be harsh or interrupted, or the expiration may be prolonged. The percussion note may be dull, flat, parchment-like, wooden, raised in pitch. Vocal fremitus may be increased. Respiration may be feeble from lack of expansion of the confined lung.

The Japanese Government has lately drafted new regulations for marriages. According to these, no man in the empire will henceforth be permitted to marry before arriving at the age of twenty. Women, however, are to be privileged to marry at eighteen.

---

[1] Harsh respiration may be produced by rapid breathing, and this source of error should be eliminated.

MR. SHAW'S VIEW OF THE CAUSE OF ROTATION IN LATERAL CURVATURE OF THE SPINE.

By A. B. JUDSON, M.D.,

ORTHOPEDIC SURGEON TO THE OUT-PATIENT DEPARTMENT OF THE NEW YORK HOSPITAL.

In his valuable lectures on "Curvature of the Spine," Mr. William Adams says: "Dr. Judson's view of the cause and mode of production of rotation does not materially differ from that of Mr. A. Shaw."[1] With a high regard for the opinion of Mr. Adams in all questions relating to spinal curvatures, I desire to point out what I conceive to be the difference between the two views referred to in the above quotation, and to present certain grave objections to the view which he has adopted.

Mr. Shaw's view is set forth by Mr. Adams in the following words: "According to this explanation, rotation of the bodies of the vertebræ is assumed to take place at the commencement of spinal curvature, and previous to any lateral deviation traceable externally. It is supposed to be directly caused by the weight of the body being thrown upon the oblique articulating processes, which are situated posterior to the bodies of the vertebræ, as well as laterally, and naturally resist and limit the lateral flexion of the spinal column. Hence, when the pelvis is tilted from any cause, such as standing on one leg, sitting in a bad position, etc., the body is thrown to one side. In this attitude, these processes resist the lateral inclination, in combination with such muscles as, in the position of the body assumed, are called into play. If, however, this faulty position be long continued, the oblique articulating processes are no longer able to resist the superincumbent weight of the body, and gradually become altered in form, so that the position becomes fixed and permanent.

"As the oblique articulating processes yield to the pressure thrown upon them, so the bodies of the vertebræ deviate laterally, as shown in diagram, Fig. 23; or as Mr. Shaw has more correctly described it, wheel partly round, the centre of motion being fixed in the articulations between the oblique articulating processes which are situated posteriorly, as well as laterally, in respect to the bodies of the vertebræ."[2]

The explanation offered by me is worded as follows: "The distinguishing feature of the explanation of rotation here proposed is the recognition of the fact, heretofore overlooked, so far as I am aware, that the posterior portion of the vertebral column, being a part of the dorsal parietes of the chest and abdomen, is confined in the median plane of the trunk, while the anterior portion of the column, projecting into the thoracic and abdominal cavities, and devoid of lateral attachments, is at liberty to, and physiologically does, move to the right and left of the median plane.

"When the median plane of the trunk curves to the right or the left, under the vertical pressure which is the direct cause of lateral curvature, their freedom from control allows the bodies of the vertebræ to fall away from the median plane, to the right or the left, while the posterior portions of the column are held in the median plane by their muscular and fibrous attachments. This deportment of the two components of a vertebra, its anterior and posterior portions, is rotation in the vertebra as a whole."[1]

Continued observations have confirmed my opinion that this view is correct and has important practical relations.

The two views above set forth are, indeed, alike, in that they both recognize, in common with several other theories that have been proposed, the fact that rotation is dependent, as lateral curvature itself is, on the vertical pressure of the superincumbent weight, or the pressure exerted by muscular action in the direction of the axis of the trunk. They differ, however, in that in the former rotation is said to be caused, under this vertical or axial pressure, by a change in the form of the articular processes which disables them from preventing a wide lateral excursion of the anterior part of the vertebral column, while in the latter it is said to be caused, under this axial pressure, by the fact that the anterior part of the vertebral column is anatomically devoid of impediments to a wide lateral mobility.

An interesting and important feature of the difference between these two views is, that in the former rotation is said to be a purely pathological phenomenon, dependent on morbid changes in the articular processes, while in the latter it is said to be a physiological phenomenon, necessarily accompanying every lateral bending of the normal spine, and becoming a pathological feature only when it becomes excessive and permanent, thus resembling lateral curvature itself, which is one of the functions of the healthy spine and only comes to be considered a disease after it has assumed a morbid degree and permanence.

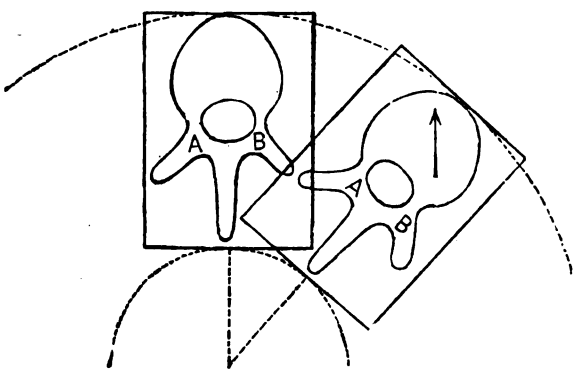
As an illustration of the rotatory flexibility of the normal spinal column, it may be said that it is not improbable that the remarkable apparent deflection of the assassin's bullet in the case of the late President Garfield was due to a rotation of the lumbar vertebræ. A strong inclination of the President's body toward the left, between the first and second shots, in response to the threatening attitude of his assailant, who stood behind and to the right, would have produced a lateral bending of the spine, with a convexity toward the right, and with a rotation of the bodies of the vertebræ still further toward the right, thus bringing the body of the first lumbar vertebra within the range of the bullet, which entered the trunk in an antero-posterior direction (as shown by the arrow in the figure below) a short distance to the right of the median line. It may be demonstrated in the living model that rotation is an incident of physiological or normal lateral curvature. A strong lateral bending of the trunk, erect or lying prone, will cause the transverse processes of the lumbar and lower dorsal regions to become prominent on the side of the convexity and to recede on the side of the concavity.

With great respect for the authority of Mr. Shaw and the highest regard for the valuable labors of his useful and honorable life, I have been unable to accept his view of the cause of rotation. I have even been led to conclude that rotation takes place in spite of, rather than in consequence of the yielding the articular processes. I reach this conclusion by a consideration of Fig. 23 of "Mr. Adams' Lectures,"[2] and Fig. 2 of my paper.[3] For purposes of

[1] Second edition, London, 1882, p. 152. See also THE MEDICAL RECORD, April 29, 1882, p. 466.
[2] Op. cit., p. 142.

[1] Transactions New York Academy of Medicine, second series, vol. ii., 1876, pp. 325, 328.
[2] Op. cit., first edition, p. 111. 1865; second edition, p. 86.
[3] Op. cit., p. 325.

illustration, these figures are virtually the same. I use mine simply because its lines are less involved. In this figure A and B represent the position of the articular processes. Those at A lie in the concavity of the curve, and are, therefore, subject to alteration in form by reason of the superincumbent weight. If rotation were determined by the yielding of these articular processes, it would take place from right to left in the above diagram, or in the direction toward which the body of the vertebra would naturally move, in obedience to the yielding of the articular processes at A. The rotation seen in the diagram is a movement which would be imparted to the vertebra by the advance rather than the yielding of the articular processes at A. Rotation in lateral curvature thus appears to take place against rather than in consequence of the supposed influence of the change in the shape of the articular processes.



Horizontal Section of a Vertebra in Lateral Curvature, with the Convexity toward the Right.

Another important point of difference between the two views under consideration is that, in the former rotation is said to be caused, under the pressure referred to above, by agencies residing in the vertebræ themselves, while in the latter it is said to be caused, under this pressure, by a foreign agent, viz., the limitation of lateral motion in the spinous processes by reason of their involvement in the parietes. In Mr. Shaw's view, rotation is the result of the yielding of the articular processes on that side of the column which is directed toward the concavity of the curvature. Herein lies a fallacy. Take, for instance, the superior articular process of the left side of the ninth dorsal vertebra in a case of lateral curvature toward the right. From pressure and absorption the articulating surface of this process, looking upward and backward, has yielded so as to allow the left side of the eighth vertebra to advance, which would be equivalent to rotation of the eighth vertebra toward the right. But, while this movement is taking place in the eighth vertebra, the yielding of the above-mentioned process would also, *pari passu*, allow the left side of the ninth to recede, which would be equivalent to rotation of the ninth vertebra toward the left. Thus, by the yielding of this articular process, rotation occurs toward the right in one vertebra, toward the left in a contiguous vertebra, but neither toward the right nor the left in the vertebral column at this point. Again, as the inferior articular processes are subject to pressure and absorption as well as the superior, while the ninth dorsal vertebra, as above described, is rotating toward the left in obedience to the yielding of its superior articular process it will also be rotating toward the right in response to the yielding of its inferior articular process, so that the vertebra in question must at the same time rotate toward the right and toward the left—an evident impossibility.

It has been said by an acute observer, Mr. Adams himself,[1] that the great majority of pathological doctrines prove to be erroneous when tested by the experience of thirty years' scientific inquiry. Mr. Shaw's view, having been published in 1832, has survived fifty years. It must, however, be finally laid aside if the objections to its validity above presented are well founded.

DRY CUPPING AND REST

Considered as Means of Relief in a Case of Locomotor Ataxia.

By HENRY M. LYMAN, A.M., M.D.,

Professor of Physiology and of Diseases of the Nervous System, Rush Medical College, Chicago, Ill.

In the early part of the winter of 1879–80, I was consulted by Mr. D——, a gentleman, then about thirty-eight years of age, a wholesale dry goods salesman, who was suffering with well-marked symptoms of locomotor ataxia. A single man, well-formed and vigorous in his general appearance, he could trace his disorder to no hereditary cause. He was, and always had been, exceedingly temperate and correct in all his habits, and had never experienced any severe sickness. He had never had either syphilis or gonorrhœa, or rheumatism. Shortly after the great Chicago fire in 1871, at which time he had been severely overworked, he began to suffer with lancinating pains and with paroxysms of painful micturition. For this he was treated at great length by an eminent genito-urinary specialist, who considered it a case of spasmodic stricture of the urethra. Treatment with bougies, etc., failed to give any relief, and was finally discontinued. For a number of years the patient continued his usual occupations with the greatest diligence and prosperity, and with the exception of the pains just mentioned he seemed to enjoy excellent health. During the course of the year 1879, he began to experience a certain degree of unsteadiness when walking, especially in the dark. After consulting a number of other physicians, he called at my office, and requested an examination. I found him presenting the usual symptoms of progressive locomotor ataxia—lightning pains, anæsthetic, paresthetic, and analgesic patches upon the surface of the limbs, absence of the tendinous reflexes, ataxic gait, diminution of the power of co-ordination in the muscles of the upper extremities, cracking of the joints, paroxysms of hyperæsthesia affecting the mucous surfaces of the mouth and pharynx, unequal contraction of the pupils, weakened power of accommodation, progressing atrophy of the optic papillæ, and failure of sexual appetite. I advised the use of ergot, which was shortly followed with nitrate of silver, and the daily use of the galvanic current.

Living at a long distance from my office, and actively occupied with the details of his business, the patient was quite inclined to neglect his treatment. He, however, fitted up a galvanic apparatus at home, which he employed with considerable skill. By this means he thought that his pain was somewhat relieved. He could not think of abandon-

[1] Medico-Chirurgical Transactions, vol. 37, 1854, p. 179.

ing his work, which was then yielding him a large income, and I soon became convinced that his ataxic symptoms were increasing.

After an absence of several weeks, he one day called upon me, to relate his experience in New York, where he had been obliged to spend some time in connection with his business. While there, he had consulted Professor E. C. Seguin, and was for several days under the eye of Dr. Geo. M. Beard. These gentlemen both concurred in the diagnosis of locomotor ataxia, and warned him against a marriage, for which he was making preparations, an opinion with which I heartily agreed.

During the month of February, 1880, my patient was quite tractable, and underwent a course of energetic treatment with the galvanic current, applied long enough over the back every day to produce great redness of the surface. He also continued the use of nitrate of silver. After taking about a drachm of the silver salt, iodide of potassium and bichloride of mercury were substituted in its place, but without any apparent effect.

As the spring and summer of 1880 progressed there was some relief of the painful symptoms. My patient ceased calling at my office, undertook a journey to California, and again visited New York, so that I did not hear from him again until the last of September, or some time in October, 1880, when he informed me that he had determined to run the risks of matrimony. The marriage took place about the middle of October, and the unfortunate bridegroom was so much exhausted by the event that he was obliged to keep his bed the greater part of the time without the slightest attempt or desire to consummate the union. From this time I lost sight of the case.

A few weeks ago I was much surprised by the information that my former patient had been completely cured by the use of Junod's boot in the hands of a non-medical empiric. I at once took measures to ascertain the residence of Mr. D——, and opened communication with him again. From him I learned the following continuation of his history.

Almost simultaneously with the occurrence of his marriage the mercantile house with which he was connected became suddenly and unexpectedly bankrupt. By this failure he found himself thrown out of employment at a time when he was perfectly helpless. His physical condition became rapidly worse. Eyesight began to fail; ataxia increased, and the muscles of the lower extremities began to dwindle, lightning pains were frequent and agonizing. The rectum became anæsthetic and uncertain in its retention of fæces. The feet were cold and numb. When sitting erect the gluteal muscles would seem to roll outward with a sensation as if the tuberosities of the ischia had suddenly slipped down over the edges of the muscles. Walking was becoming very difficult, and was quite impossible in a dark room.

While in this pitiable condition, some one advised him to consult an empiric who was treating rheumatism with Junod's boot. The interview did not produce a favorable impression, but inasmuch as the remedy was offered gratuitously if no benefit should accrue, Mr. D—— concluded to make the experiment January 8, 1881. At first there was no apparent benefit, though the apparatus was applied twice every day. After about a month the pains began to diminish, and the circulation began to improve in the extremities. Thus encouraged Mr. D—— procured a set of the cups, etc., and his devoted wife conducted the treatment at home. The cups were applied along the spine, and the limbs were treated with the boot. Gradually improvement took place, and during the summer of 1881 the pains were entirely relieved and have never returned. The muscles also resumed their former volume; the rectum recovered its sensibility, and the sphincter renewed its appropriate function. Eyesight improved until now he is able to read without the slightest discomfort. Appetite returned; digestion was restored; the power of locomotion increased; and at the end of a year after the commencement of treatment, erections began once more to occur.

On examining Mr. D—— I found everything as he represented it. There is still some degree of ataxia manifest in the movement of the feet, especially when excited or weary. The upper extremities are perfectly manageable. Anæsthesia has disappeared from the regions where it was formerly manifested, but the tendinous reflexes are still absent. The patient walks easily and rapidly without a cane, turning sharply around without difficulty, but he is unsteady on his feet with his eyes shut, and is unwilling to trust himself in the dark. The eyeballs move perfectly, but the pupils are contracted and do not respond readily to changes of light, though they move somewhat in accommodation. There is considerable atrophy of the optic disk. Difficulty is apparent in recalling proper names, but otherwise the intellectual processes are intact. Appetite, digestion, and sleep are perfectly natural. The patient no longer feels that excessive sensibility to changes of temperature which formerly troubled him. Erections take place as often and as completely as ever. Amatory feelings have revived, and sexual intercourse has been performed several times without much subsequent lassitude, but for prudential reasons has been discontinued. The patient feels competent to resume business, but is wise enough to see that his disease is not cured, and that discretion is still the better part of valor. He still continues the use of the cupping apparatus every other day, and is positive in his conviction that his improvement, though gradual, is progressive. It is certainly true that his condition is vastly superior to what it was when I previously saw him at the time of his marriage—an improvement which is due in part to his long vacation from business, and in no inconsiderable part to the powerful counter-irritation and derivation effected by the use of the cupping apparatus. If this had produced no better result than the mere relief of pain, it would still be invaluable in his estimation. Its effect upon the general health and nutrition gives it the right, in this case at least, to rank with hydrotherapy, massage, and the Swedish movement cure as a method of treatment which deserves trial as a means of retarding the progress and relieving the anguish of one of the most intractable of diseases.

September 8, 1882.

EDISON'S ANÆSTHETIC.—Thomas Alva Edison has invented (?) a new anæsthetic compound of a mixture of chloroform, ether, alcohol, and camphor, which he has protected by letters patent in England and Germany. He probably wishes to use the new compound on the stockholders until the electric light is in successful operation.—*Chicago Medical Review.*

Progress of Medical Science.

TRANSITORY BLINDNESS FOLLOWING CHILD-BIRTH.—The following case is related by Dr. Adolf Szili in the *Centralblatt für Practische Augenheilkunde* for June, 1882: A lady, about thirty-five years of age, on the fourth day after delivery became suddenly blind. There had been no hemorrhage nor eclampsia; the urine contained no albumen. Full light had been let into the lying-in chamber for the first time that morning. No inconvenience was experienced during the period of illumination, but when the room was again darkened, the sight was suddenly lost. When examined a few hours later, there was no sensibility of the cornea; the pupils were moderately dilated and did not respond to light. The fundus was somewhat pale, but there was no especial pallor of the optic nerve nor contraction of the retinal vessels. The patient saw always through a bluish mist which did not change in varying degrees of light, nor was it broken by photopsia on pressure. Nothing else was complained of. The pulse was rather slow; temperature normal. The room was kept perfectly dark. No change occurred for forty-eight hours, when there was a temporary restoration of vision upon the lighting of a candle in a corner of the room, but as soon as it began to burn brightly the sight disappeared again. On the third day such trials were followed by a longer duration of vision. Not until the end of a week was a faint glimmer of light permitted to enter the chamber from one side, and this was gradually increased. At the end of a month the patient could read Jaeger 1 in a half-light, but only 7 or 6 in full light, and that with difficulty. A complete cure was obtained in six weeks. Two years have since passed without any recurrence of the trouble. Dr. Szili defines the condition as a hyperæsthesia of the retina, caused by the dazzling light, aided by the lowered tone of the patient consequent upon delivery.

RECTAL POLYPI IN CHILDREN.—Professor N. J. Bystroff bases the following conclusions upon the notes of thirty-one cases of polypus of the rectum in children, observed by him in the last seven years: The chief symptom of this condition, in some cases the only one, is the presence of blood in the stools, in quantity varying from a few drops to an ounce. The bowels may be regular, or there may be either constipation or diarrhœa. Pain is seldom complained of, but there is nearly always tenesmus. The pathognomonic sign is the protrusion of the tumor, though sometimes, from its situation high up in the rectum, this does not occur. The color of these tumors is darker than that of the rectal mucous membrane. The size varies from that of a pea to a plum, or even larger. The shape is round or egg-shaped, seldom pyriform. In consistence the tumors are soft; the surface is usually smooth, though sometimes rough and uneven. The polypi were located in two-thirds of Bystroff's cases on the anterior wall of the rectum, in one-third on the posterior, and for the most part between the internal and external sphincters. Multiple polypi were not observed. The general health was somewhat impaired through the repeated losses of blood. The youngest of his patients was two years and eight months old, the oldest thirteen years, the average age being, in boys, 6.8 years; in girls, 7.4 years. The sex seemed to have no influence. A polypus is most often mistaken for prolapse of the rectum, but the absence of a round opening in the centre of the tumor and of increase in size when straining will serve to exclude the latter. Polypi are more rare than prolapsus; the latter occurs in young children, the former is seldom observed in children under three years of age. In two cases a diagnosis of hemorrhoids had been made—a very rare disease in young children. A change of size under varying conditions, the presence of other varicosities, and the absence of a pedicle will suffice to distinguish piles. From dysentery polypus is to be differentiated by the absence of fever, presence of a tumor, and passages which are streaked, not mixed, with blood. An irritating enema suffices usually to bring the polypi to view, or they may be detected by digital examination or through a fenestrated speculum. Spontaneous separation of the polypus can occur. Its surgical removal is accomplished, after previous ligation of the pedicle, by the knife or scissors. Bystroff does not favor the use of the cautery in these cases.—*Deutsche Medicinal Zeitung*, June 29, 1882.

STATISTICS OF ONE HUNDRED AND THIRTY-ONE CASES OF CARCINOMA OF THE BREAST IN VOLKMANN'S CLINIC.—Dr. O. Sprengel has carefully analyzed 131 cases of mammary carcinoma operated upon in Volkmann's Clinic, from 1874-78. 112 (eighty-four per cent.) of the patients were married, 8 of whom, however, had never borne children. Of 98 cases in which the fact was noted, 21 had had mastitis once, 4 more than once, and in 4 both mammæ had been inflamed. In 44 cases traumatism was alleged as a cause. In regard to heredity 109 gave exact statements; 13 denied any hereditary taint. The seat of the tumors was in 56 cases in the right breast, in the left in 75. The tumors which appeared in immediate connection with pregnancy or lactation ran an especially malignant course. As regards the involvement of the neighboring tissues the skin was earlier attacked than the muscles. In but 2 cases, in which very small nodules were removed, was the rule for the total ablation of the mamma departed from. The results in the 131 cases, with 200 operations (including the secondary operations), were 10 deaths—1 from shock, 2 embolism of the lungs, 1 hæmatemesis, 1 gangrene, 1 erysipelas, 4 septicæmia. If the disease returned at all it was usually within the first six months after the operation. 15 are reported as cured, of which number 13 remain perfectly free from the disease after a lapse of more than three years after the operation, 1 had cancer in the opposite breast, and 1 died of a tumor, entirely distinct from the original trouble, more than three years after the removal of the breast. The cases operated upon in 1878 are not included in these figures. Of these 6 remain well, 1 for twenty-seven months and 5 for over thirty months. Of 29 cases in which there was no glandular involvement, 6 were cured, but only 9 recovered of the 102 in whom the axillary glands were already affected.—*Centralblatt für Chirurgie*, July 15, 1882.

SNAKE-BITE: RAPID CURE BY PHENIC ACID.—Dr. Sereins relates a case of snake-bite treated successfully by hypodermic injections of phenic acid. The patient, a charwoman, forty years of age, was bitten by a venomous snake on the left foot, just below the external malleolus. Half an hour afterward she experienced an intense smarting at the point of injury, and a sensation of constriction in the abdomen and epigastric region. Soon she began to throw off

quantities of glairy mucus and bile. The vomiting was almost incessant, and each attack was preceded by a painful aura starting from the wound, passing up the limb and radiating toward the stomach. A tourniquet was applied to the limb and the wound covered with a compress dipped in a solution of ammonia. Dr. Sereins arrived two hours after the woman had been bitten, and found her vomiting and suffering from a sense of impending suffocation. The skin was cold and covered with perspiration, the pulse small, feeble, and beating 110 in the minute. On the external surface of the foot, just below the malleolus, were two little red points, and above them a small blister caused by the ammonia. The lower part of the leg was enormously swollen, the skin marbled, with here and there yellowish spots and points of ecchymosis surrounded by small vesicles. The patient complained bitterly of cold. Four hypodermics of a solution of phenic acid in glycerine (2 in 15) were given, one in the neighborhood of the bite and three at the upper edge of the œdematous part of the leg. The wound was also bathed with the same solution. In one hour there was a very appreciable reduction of the swelling, the vomiting became less persistent and ceased entirely in four hours. The next day the constricting ligature was removed from the leg. On the second day the patient had entirely recovered, there was but slight swelling of the leg, and the yellow spots and ecchymosis had disappeared. The case seems remarkable in the rapidity of the cure effected. Few accidents of this kind are ever recovered from (if at all) short of a fortnight. Then the woman was not seen until two hours had elapsed after the wound was inflicted. The nervous centres were profoundly affected, as evidenced by the symptoms. Thus the phenic acid not only destroyed the venom at the point of introduction, but even neutralized its effects in the general system.—*L'Union Médicale*, June 29, 1882.

Pulmonary Tuberculosis of Traumatic Origin.—Dr. Potain, in *L'Abeille Médicale* of July 3, 1882, relates a case of pulmonary tuberculosis of traumatic origin, which may be of interest as tending to disprove the universal applicability of Koch's theory. The patient was admitted to hospital, giving the following history: Four months previously he had received a kick from a horse on the left side of the chest, the accident being at once followed by spitting of blood. Two months later he began to suffer from a frequent cough, with profuse expectoration. When nearly well from this attack he was seized anew with cough, had fever, pain in the left side of the chest, and frequent hemoptyses. Physical examination of the chest at this time revealed an impaired resonance on the left side, weak respirating sounds and numerous râles. There was also a flattening of the chest-wall, the circumference of the left side being nearly one inch less than that of the other side. The man lived but a short time after admission to hospital. At the autopsy the left lung was found to be the seat of extensive tubercular infiltration, with a cavity near the apex. There was no history of tuberculosis in the family. The parents had been long-lived, and none of the brothers or sisters had ever suffered from any pulmonary affection. The origin of this patient's disease was undoubtedly a pneumonia induced by the kick of a horse. The author states that he has observed a similar case in which a severe injury to the chest-walls was followed by a cough with bloody expectoration, the patient finally succumbing to pulmonary tubercular disease. The autopsy in this case revealed a cavity corresponding in location to the seat of the original injury. Dr. Potain, however, inclines to the belief that in some cases, at least, the traumatism may be merely the exciting cause of a previously latent tuberculosis.

Three Hundred Ovariotomies in Italy.—Dr. Domenico Penizzi has published in *Raccoglitore Medico*, July 20, 1882, a paper containing statistics of Italian ovariotomies, of which the following is a brief extract: Nineteen years elapsed after the first operation for the removal of an ovarian tumor was performed in Italy until the hundredth case was recorded. The second hundred was announced two and one-half years later, and the third series of one hundred ovariotomies was completed in twenty-three months. In the first hundred operations 63 deaths were recorded; in the second the mortality was reduced to 36; of the third hundred operations but 26 resulted fatally. Though these statistics compare very unfavorably with those of some other countries, they yet show a gratifying progress in Italy itself. The causes of death in the last hundred were: peritonitis in 10, shock in 6, septicæmia in 5, cardiac thrombosis in 3, hemorrhage and intestinal occlusion in 1 each. One patient, not included in the statistical tables, died of chloroform narcosis. The hundred ovariotomies were performed by 46 operators. In 5 of the cases both ovaries were removed, and all of these recovered.

Punctate Cauterizations in the Treatment of Pulmonary Diseases.—Dr. Vidal writes, in *L'Union Médicale* of July 20, 1882, advocating numerous light cauterizations in the treatment of diseases of the respiratory organs. He employs a Paquelin cautery, with a very fine point kept just at white heat. The point is held in the hand like a pen, and the operator, by a rapid movement of the wrist, makes a number of exceedingly fine lines about fifteen millimetres apart, just grazing the epidermis, but never going deep enough to destroy any of the deeper cutaneous tissues. The efficacy of the procedure depends rather upon the multiplicity of the cauterizations than upon their depth or superficial area. A sitting should be held once in two or three days, care being taken in the repeated operations to avoid the points on the skin previously touched by the cautery. The pain caused by the operation is very trifling, and no disfiguring cicatrices are ever left. The effects produced by this punctate cauterization are of three kinds. The first is in the action on the skin. There is always an intense hyperæmia of the skin following the operation, together with an elevation of local temperature, amounting in some cases to more than 1° C. The impression produced upon the nervous centres is shown by the horripilation of the skin, which is pretty constantly observed over the cauterized area.

The effects produced upon the lungs and pleura are observed in a reduction of the number of pleural friction sounds, together with the gradual subsidence of all the evidences of pulmonary congestion. The dulness diminishes, the lung becomes more permeable to air, and in some instances Dr. Vidal even claims to have succeeded in arresting hemorrhages of some gravity. At the same time there is an evident improvement in the cough and expectoration. The effects upon the general system are equally noticeable. The fever diminishes, the evening exacerbations lose their regularity, sometimes

even disappearing entirely, the sleep becomes refreshing, and it is seldom necessary to continue the use of atropine to control the night-sweats; the appetite improves, the diarrhœa is checked, and in women the suspended menstrual functions are restored.

The author gives the results in forty-four cases of phthisis treated by him on this plan during the winter of 1881–82. Two of his patients discontinued the treatment, three died, two remained stationary, and in one case the disease steadily progressed; the remaining thirty-six were benefited, some markedly so. Eighteen of his patients had previously had hemoptysis; in ten of these there was no return during the winter, and in the other eight each recurrence of hemorrhage was promptly checked by the employment of the punctate cauterization for a short sitting.

While Vidal's claims are to be received with caution, his method certainly deserves a trial, and may yet prove a valuable adjuvant to other plans of treatment.

Cirrhosis of the Liver, with Adenoma.—The following case was reported by Dr. A. Sevestre to the Société Médicale des Hôpitaux: The patient, a man forty-four years of age, had always enjoyed excellent health up to within two months of the time of coming under observation. There was no history of hereditary disease. He had, however, for a long time indulged freely in wine and brandy. The first symptoms were those of digestive disturbance—nausea and vomiting of mucus and bile following each excess in drinking. The appetite failed and was finally lost completely. At this time the patient began to emaciate rapidly, losing twenty-five pounds in four weeks. Two weeks before admission to hospital he experienced a sensation of heat and weight in the epigastric region, and the abdomen increased rapidly in size. On admission to hospital the abdomen was greatly distended, the skin tense and marked with a network of distended veins. The liver could not be discovered on palpation, owing to the abundant ascites. There was no œdema, even of the lower extremities. The forehead, cheeks, and nose were the seat of a confluent eruption of acne rosacea. The skin was of an earthy hue. The urine was scanty, reddish in color, and threw down a brick-dust deposit. It contained no albumen, but nitric acid revealed the presence of biliary coloring matter. Physical examination of the chest revealed nothing of importance. A diagnosis was made of acute cirrhosis of the liver. The abdomen was tapped and a large amount of serous fluid withdrawn, but the patient continued to emaciate and died in a few days. At the autopsy the abdominal cavity was found to contain a moderate amount of fluid. The liver was enlarged, weighing a little over five pounds. Its general form was preserved, but the surface presented the appearance of a cirrhotic liver, with nodules varying in size from a millet-seed to a large pea. In addition there were here and there larger projections, paler than the rest of the organ and resembling cancerous nodules. At certain points, particularly on the under surface of the organ, were seen pale streaks, evidently distended veins. On cutting across these, a thick fluid of a yellowish white color escaped. The portal vein was occluded with what was taken to be a decolorized coagulum. Its intestinal position, however, was patent. The spleen was normal. The stomach gave evidence of gastritis. The histological examination was conducted by M. Sabourin. He reported that the cirrhosis was general and entirely distinct from the tumors disseminated through the organ. The latter were simple and round or irregular in shape, and divided into lobes and lobules. All were encysted or in process of becoming so. These tumors approach the type denominated adenoma of the liver. They take their origin in the hypertrophy of a group of lobules through hyperplasia of the hepatic cells. As soon as one of these adenomatous nodules is in process of formation, it tends to become encysted through atrophy of the neighboring lobules. The portal vein and its branches were filled with colloid material and detached epithelium, and not, as was at first supposed, with a decolorized blood-clot. This case presented in nearly all its symptoms a clinical picture of ordinary cirrhosis—digestive troubles, ascites, enlargement of the superficial abdominal veins, brick-dust deposit in the urine, earthy complexion, etc. But there were other symptoms which are a little unusual. The speedy progress of the disease, the marked emaciation, the rapid development of ascites, and establishment of the collateral circulation. In the etiology alcohol would seem to have played an important part.—*L'Union Médicale*, July 27, 1882.

Hydroa of the Mouth.—Hydroa, when it occurs in the mouth, may give rise to certain erroneous diagnoses—syphilis, for example—leading to energetic treatment which, at best, is useless. Dr. Quinquad (*Annales de Dermatologie*) has recently given a description of this affection, which may be of service in differential diagnosis. The affection is essentially superficial, and varies according to the region which it attacks. On the lips it begins by an intense redness on the median line or on either side of this line. It hardly ever has its place in the commissures which distinguishes it from the syphilides. The erythema is at first circumscribed, sometimes occupying the mucous membrane alone, sometimes the mucous membrane and the skin. The redness is like that of the cherry. Within the first thirty-six hours it manifests an opalescence similar to that of the syphilides; ulceration follows upon the ingestion of irritating viands, and gives rise to a slightly sanguinolent discharge. At this time the lips are covered with disseminated crusts, presenting here and there fissures. These brownish concretions circumscribe whitish, opalescent, humid spaces, which give place to vesicles. The same lesions may be met with on the inside of the lips, on the gums, where it resembles an ulcero-membranous stomatitis; on the tongue, where it simulates thrush, and on the palate. The eruption has three phases of evolution—an erythematous phase, which is very short; an erythemato-phlyctenoid phase, during which are produced the exudations; a phase of ulceration, which simulates the mucous patches of syphilis, and is followed by a period of repair. During all these stages pain is present. As a rule the eruption affects the mouth only when very intense and widespread. To this, however, there are some exceptions. The treatment consists chiefly in mild and astringent gargles.—*Chicago Med. Review*, August 1, 1882.

An Exhibition of Rational Dress is to be held in London under the auspices of the Rational Dress Society. A prize of $150 will be given for the most rational dress.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, September 30, 1882.

SCARCITY OF ORIGINAL WORKERS.

It has often been said by foreign physicians that the American medical man is not much inclined toward original work. While this is not so true as formerly, the charge still holds good in a great measure. But we must consider, comparing the profession in this country with that of Europe, that there are not a few good reasons for this. Taking the American medical profession in the aggregate, its standard of acquirements is much below that of medical men abroad. It goes without the saying that the so-called education of medical men here is cultivated more as a business than a science. Consequently, in order to gain patronage, the struggle with the majority of educators appears to be in the direction of affording the easiest possible entrance into a profession for a given outlay of money. It is not surprising, then, that a goodly majority of the hundreds of yearly accessions to our ranks have a comparatively low standard of qualifications, which scarcely fits them for the every-day duties of the ordinary practitioner, much less for progressive work in the profession. With the average graduate in medicine there is on this account a constant struggle against heavy odds during most of his career.

What inclination he may have for extra study must be in the direction of making good his lost opportunities, of filling in the gaps of what should have been a solid foundation from the beginning. Whatever may be said of the advantage of natural genius in surmounting great obstacles, they never amount to much in professional training, compared with patient, systematic, long-continued, plodding work. It is easy to see under what disadvantages the average medical graduate labors. While we are inclined to pity his miscalculation, we are hardly ready to excuse his shortcomings. He does as well as he can, it is true, but under the circumstances this is his only excuse for trying to do at all.

But even among our well-educated medical men there are serious obstacles to progressive work which do not obtain to an equal extent in other countries. We may refer to them in passing, by way of explaining more than of excusing their natural results, for on general principles it is expected of the ambitious struggler that he shall overcome difficulties. Still, this is not always possible, as we can easily see. For instance, the bread-and-butter question is constantly before the most ambitious and best qualified medical man. He is forced to turn his knowledge to practical account in getting money to support his family and keep on the right side of his expenses. Be his practice large or small, it must under the circumstances absorb his greatest attention, and call forth his best working energy. When he comes to this, he generally does his best in keeping up his knowledge to the actual requirements of his every-day duties. Too often, indeed, it becomes with him the exception rather than the rule that he can study at all.

While this may be difficult enough when the necessities of the hour press themselves upon the busy practitioner, how much more so must it be when he is inclined to strike out in some new or original departure, requiring extra time, engrossing thought, hard study, and untiring industry. We must be understood in all this as attempting to give the reason why he does not do original work, rather than why he should not do it. It may, at least, be said that the difficulties in the way of his climbing, although not insurmountable, are great indeed compared with what they are in other countries, where competition is not so active, and where good doctors are not so plentiful.

But besides this, in the large medical centres of Europe, there is a goodly number of well-educated men, whose living is assured by salaried positions under the government and in the universities, and whose time and opportunities for study are everything which the most ambitious investigator could wish for. Indeed, there is a premium placed upon such original work as tends to the advancement of science, pure and simple. Hence the professors of pathology, physiology, anatomy, and chemistry have larger salaries attached to their chairs than do the professors in the clinical departments, as the latter can necessarily add to their incomes by practice. But underlying all the real good work is a guarantee to them that the living shall be secured, and the question of the supply of actual wants shall be kept decently in the background. Place the average ambitious, well-educated American medical man on such a footing, and he will make equal progress.

We have seen what can be done under govern-

ment patronage, even to the limited extent to which its advantages are extended in this country. Take, for instance, what has been done in the office of the Surgeon-General of the Army during the past fifteen years, the writing of the medical and surgical history of the war of the rebellion, a work unrivalled anywhere, the army medical library, a collection for extent and variety unequalled in this country or abroad, the wonderful microscopical studies in the laboratory of the Army Medical Museum, and last, but not least, the founding and arrangement of the museum itself, comprising thousands of specimens illustrating many of the rarest and most wonderful pathological lesions. Again, the more recent investigations into the origin and causes of yellow fever, cholera, and diphtheria, are not to be omitted in the enumeration of the grand achievements which have been made possible under the auspices named. Unless the proper facilities as to means, opportunity, and livelihood were afforded to the gentlemen engaged in these undertakings, such gratifying results would have been utterly unattainable. The approach to this condition is in the medical men who have assured incomes aside from their practice, or whose business is large enough to allow them the time for studies of their choice. Although much is done by the actual bread-winners in our profession, by men who stop at nothing in the way of an ambition to do and dare, the greater part of the original thinking is accomplished by such as are afforded ample time and opportunity for so doing. The young man of wealth has decidedly the best start in a good education and means to perfect it. He can attend the best schools, can spend his time in our larger hospitals, can enjoy the advantages of special courses here and abroad, and while waiting for practice and studying his cases, he is not worried about his board bill or office rent. From such men, having the right sort of ambition, our best expectations are to be realized. Unfortunately they are as yet too few in number in this country to give the American profession its share of substantial and progressive workers.

In the other category of advancing men are to be found the successful practitioner, whose time can be made his own, whose living is easily earned in his morning office hours, whose consulting-room is always well patronized, and whose hours for study in his library, laboratory, or in the hospital ward can always be secured from his busiest days. Such men make up the bulk of our medical authors, the majority of our original investigators, the winners of our medical prizes, and, best of all, our most accomplished practitioners. Happily, we have many of these; not in a necessary proportion, perhaps, but the number is constantly increasing, and there are proportionately good hopes for the future. We would fain believe that we are approaching the time when endowed professorial chairs will be a demonstrated fact, when higher medical education will be a reality, when government patronage shall be still more extended, and when, by the profession itself, still more incentives for original investigation may be offered in the shape of larger and more substantial prizes.

It is only by such means, and with the increased opportunities for work, that the profession of this country can take its proper position as an advancing scientific body. There are enough men capable of doing the best kind of original work, if reasonable facilities for its accomplishment were within their reach.

COTTAGE HOSPITALS.

We are glad to learn from several parts of the country that the suggestions in the recent article on the establishment of cottage hospitals have been so favorably received. It is quite evident that prominent members of the profession in many of the larger towns of this and adjoining States are in favor of organizing such charities. As such can be done on a comparatively inexpensive scale, there need not be many difficulties in the way.

A good commencement can be made by renting a cottage on the outskirts of a town and fitting it with a small number of beds. When once the utility of the measure can be demonstrated to the local authorities and the men of wealth in the vicinity, there will not be much trouble in obtaining the necessary amount of funds for the erection of a cheap and suitable hospital building.

According to the estimates made to the State Board of Health for similar buildings, the expense of construction need not exceed six thousand dollars for an institution containing from ten to fifteen beds. Where land is low priced and lumber plenty the expense will be proportionately less. In the interesting and exhaustive work of Mr. Henry C. Burdett,[1] of London, on "Cottage Hospitals," will be found descriptions of such institutions of even larger capacity which can be built at even less cost. For instance, the outlay for construction of the Petersfield Cottage Hospital, a model of its sort, capable of accommodating sixteen patients, was but $5,500. In fact, he mentions numerous examples of the relative cheapness and utility of such structures. The number of cottage hospitals in successful operation in England is sufficiently large to leave no doubt that a similar experience can be had in this country, where magnificent distances between centres are the rule and where accidents of every variety are very common.

[1] Cottage Hospitals, General, Free, and Convalescent. Their progress, management, and work, with plans, illustrations, etc. By Henry C. Burdett, Member of the Council and Fellow of the Sanitary Institute of Great Britain, etc. Second edition, rewritten and enlarged. London: J. & A. Churchill, 1880.

In some large manufacturing districts an approach is made to the cottage hospital system by levying an individual tax upon the operatives, and in consideration for the same providing them with medical attendance during sickness. In some instances special buildings are appropriated for the purpose. These are, however, private enterprises, only tending to prove at how small a cost the sick can be cared for. Cottage hospitals as such should belong to the towns and be more or less under the control of the health authorities, by whom the medical staff may be appointed.

BACTERIA AND THE PATHOLOGY OF SYPHILIS.

The idea of living organisms being the cause of syphilis was expressed in a rude form as early as the seventeenth century. It has been reserved for the last decade, however, to defend this view with any facts or arguments deserving attention. In 1872 Lostorfer created a sensation by announcing the discovery, in the blood of syphilitics, of microscopic bodies, pathognomonic, as he claimed, of the disease. The bodies in question were soon found to exist in other diseases, however, and were shown to originate from the white blood corpuscles.

Not long after this, Klebs announced the discovery of micrococci in the initial lesions of syphilis. He did not, however, find them in the secondary lesions. At a meeting of the New York Pathological Society, November 11, 1880, Dr. Berman, of Baltimore, showed what was claimed to be these same organisms. But no positive evidence was given that they had a specific character.

Disappointment has not dampened the ardor of pathologists, however. Aufrecht, following Klebs, found micrococci in the juice from condylomata; and now Birch-Hirschfeld, of Berlin, announces that similar micro-organisms are constantly present in gummatous ulcers and the gummata of internal organs. They were found chiefly in zoogleia or colonies in the outer parts of the syphilomata. In some cases, however, they could be seen within the round, oval, and spindle-shaped elements of the granulation-tissue.

Under high powers these organisms were seen to be very small, rod-shaped bodies, not more than one twenty-five thousandth of an inch in length. In some cases they appeared spherical, but this was, no doubt, owing to their position.

The zoogleia masses were demonstrated in the following way: The specimens were hardened in alcohol; sections were then soaked in vinegar and mounted in glycerine, when they could be seen without further manipulation. Staining with fuchsin, in the ordinary method, brought them out more distinctly.

Birch-Hirschfeld found the above-described organisms in twelve gummata taken from different viscera in seven cases. He also found them in the initial and secondary lesions of three cases. One of the gummata examined was from the lungs of a case of congenital syphilis.

Hirschfeld's alleged discoveries have excited much attention. It seems hardly necessary to make any comment upon them, however. We would call attention simply to two points: The alleged specific micrococci were found in a case of congenital syphilis. It is very difficult to frame an explanation of how the baneful organisms were transmitted to the child from the diseased parent. Again, the organisms were found in the tertiary lesions of syphilis, which lesions are not auto-inoculable, and probably not contagious in any way. The micrococci, therefore, found in them have either lost their specific characters, or they never had any, which, we confess, seems more probable in the light of our present knowledge.

To prove that there is a specific organism for syphilis, this organism must be shown to be present in all contagious lesions, and absent in the non-contagious. It must be isolated and cultivated; and the cultivations must be proved to have specific properties.

At present by far the most satisfactory theory of the pathology of syphilis, if one must have a theory, is that the disease, as urged by Otis, is due to an (speaking provisionally) unorganized, though not inorganic, poison; in other words, to a pathological ferment which impresses morbid activities upon the cells to which it is brought.

THE DOCTOR'S CLOTHES.

It is related of the late Professor Skoda that he was invited to dinner at court one day, and went directly from lectures in his ordinary dress, which was not overclean. Upon being reminded that his costume was not what etiquette expected, he answered that he would go home, if they wished, and send his frock-coat to dine. This anecdote has been much quoted as showing great wit and independence of spirit on the part of the late professor.

It may be looked at, however, from quite another point of view. Society very quickly classes persons who do such acts as boors, and justly finds as much vanity as independence in their parade of slovenliness. Skoda's example was a bad one.

The doctor has two rules which should guide him in his dress. It should be neat and unobtrusive. He should neither flaunt himself in unconventional garments, nor aim at being the glass of fashion.

Uncleanliness and slovenliness are crimes in a sick-room.

The day has long passed when the physician attempts anything like a professional cut to his clothes. In the last century, the physicians were men of learning, and posed themselves as such.

The wig and the gold-headed cane proclaimed the doctor a man of medical skill perhaps, of medical erudition certainly. Now the doctor is a man of the world. He studies human nature and his patients rather more than his authorities. In his dress, therefore, he should ally himself with those whom he meets. Eccentricities are not tolerated now, except among the aged who have won the right to do as they choose, and still claim respect.

To the items of neatness and unobtrusiveness in dress some would now add certain qualifications of a sanitary character. Our dress, says a "Country Practitioner" in the *California Medical Journal*, is quite irrational. The neck and extremities are exposed, the back and hips are swathed in many layers.

No doubt there are some improvements possible, and perhaps, in the future, when every town has a Board of Health, a model suit of sanitary clothes may become the fashion. For the present, most of us can get along very well with the judicious use of flannels. We shall always oppose the idea that one of the physician's duties is to live up to a sanitary ideal—for the benefit of ungrateful humanity.

THE VALUE OF EUCALYPTUS OIL.

Dr. G. v. Schleinitz, of Arnsberg, gives the results of his experiments with eucalyptus oil. He has used the drug quite extensively, giving it in doses of ℥x. to ʒj., dissolved generally in diluted alcohol. A slowing of the pulse was generally observed after large doses, and there was always a very perceptible odor of the oil in the breath, showing that it is excreted by the lungs very largely.

Externally the oil was used in dressing wounds. The results obtained were good, and agreed with those of other observers. No remarkable advantage can be claimed, however.

The oil is somewhat irritating, and it was generally applied by soaking gauze in a five per cent. solution. Eucalyptus is not a powerful aseptic or antiseptic, however. According to Koch's experiments, a solution must be at least of the strength of seven per cent. to destroy germs, although a one per cent. solution will prevent their growth.

In diseases of the skin, eucalyptus oil gave unsatisfactory results. It was tried in eczema prurigo, psoriasis, etc. It seems to be too irritating, and to have no specific effect.

In diseases of the vagina (inflammation) and uterus the oil was employed, but also with unsatisfactory results.

Internally, eucalyptus was given for chronic intestinal catarrh, dysentery, and summer diarrhœa, but without success. Its use in four cases of typhoid fever was equally ineffective. It was not tried for vesical or urethral troubles. Although other observers have claimed something for it here.

The most satisfactory results were obtained in bronchitis, phthisis, and whooping-cough. The oil was given by inhalation. Its action seemed to be somewhat like that of turpentine, but more agreeable.

Schleinitz's experience, as regards respiratory diseases, resembles that of Gunbert, Carlotti, Schultz, and others. His method of giving it by a special inhaler or respirator (Hausmann's) may be an advance. A number of clinical histories are given.

According to the present evidence, eucalyptus oil, although useful in various ways, has no specially good medicinal value, unless it be in diseases of the respiratory organs.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Seventh Annual Meeting, held in Boston, Mass., September 20, 21, and 22, 1882.

WEDNESDAY, SEPTEMBER 20TH—FIRST DAY—MORNING SESSION.

The Society was called to order at 10 A.M. by the President, Dr. T. Addis Emmet, of New York.

The Secretary, Dr. Jas. R. Chadwick, then called the roll, and the following members responded: Drs. Lyman, Bixby, Reynolds, and Richardson, of Boston; Mundé, F. P. Foster, and Barker, of New York; W. T. Howard, and H. P. C. Wilson, of Baltimore; Joseph Taber Johnson, of Washington; Van de Warker, of Syracuse; Engelmann, of St. Louis; Trask, of Astoria, N. Y.; Jackson, of Chicago; Kimball, of Lowell; Drysdale, of Philadelphia. Subsequently there were present: Drs. Thomas, C. C. Lee and Garrigues, of New York; Skene and Byrne, of Brooklyn; A. H. Smith and Goodell, of Philadelphia; Campbell, of Georgia; and Busey, of Washington.

The following were made

MEMBERS BY INVITATION

during the meeting:

Mr. J. Knowsley Thornton, of London, England; Drs. Abbot, Arnold, Baker, Blake, Boardman, Brown, Curtis, Doe, Draper, Edson, Fifield, Forster, Hodgdon, Homans, Hosmer, Ingalls, Minot, Sinclair, C. E. and J. Stedman, Swan, Wellington, and B. E. Cotting, of the Boston Obstetrical Society; Drs. E. C. Gehrung, of St. Louis; M. D. Mann, of Buffalo; P. H. Ingalls, of Hartford; S. Cooper, of Westfield, N. J.; F. E. Stewart, of Philadelphia; Robert T. Wilson, of Baltimore; Drs. S. A. Green, Mayor, H. J. Bigelow, H. I. Bowditch, C. Ellis, R. H. Fitz, R. M. Hodges, H. C. Haven, J. Homans, F. J. Knight, G. C. Shattuck, G. B. Shattuck, J. C. Warren, J. C. White, C. J. Blake, H. W. Williams, O. W. Holmes. B. Cushing, and C. Withington, of Boston; J. T. Whittaker, of Cincinnati; W. Symerington Brown, of Stoneham; W. E. Moseley, of Baltimore; H. Marion Sims, of New York; L. Wheeler and Geo. E. Francis, of Worcester; L. S. Fox and W. T. Carolin, of Lowell; F. H. Hooper, A. N. Pierce, and Dr. Jewett, of New Bedford; and E. H. Grandin, of New York.

THE ADDRESS OF WELCOME

was made by Dr. G. H. Lyman, of Boston, First Vice-President, upon whom the duty devolved, owing to the illness of Dr. Storer.

The first paper was read by Dr. Joseph Taber Johnson, of Washington, D. C., on

THE PROPER USE OF ERGOT IN OBSTETRICS.

The author had nothing new to offer, but hoped to bring the knowledge already possessed into such shape as to show the powers of the drug for good and for harm, and to formulate a few safe rules for guidance in its administration to women in labor. With its other uses he did not deal. The author then referred to the different teachings concerning the use of the drug. With reference to its physiological action there was an agreement that it produced in a uterus already in labor a persistent tonic contraction which finally became tetanic in character, and that this kind of contraction was diametrically opposed to the intermittent rhythmical contractions of the normal parturient uterus. The danger of long-continued pressure of the head of the child upon the soft parts of the mother was then referred to, and also the liability of producing still-births by the use of the drug to overcome uterine inertia. He did not believe in its efficacy in cases of retained portions of the membranes, and thought that the labor of their extraction was very much increased by its use. He believed that the human race would be better off without than with ergot in the management of labor; certainly it should never be given to a primipara.

The paper was discussed by Drs. J. P. Reynolds, of Boston; Fordyce Barker, of New York; W. T. Howard, of Baltimore; J. D. Trask, of Astoria, N. Y.; G. J. Engelmann, of St. Louis, and the discussion closed by Dr. Johnson.

The Secretary, Dr. Chadwick, then read a paper by Dr. R. S. Sutton, of Pittsburg, Pa., and entitled

SOME REMARKS ON THE TREATMENT OF THE PEDICLE IN OVARIOTOMY.

The paper was largely historical in character, and contained a careful résumé of the different methods of treating the pedicle in ovariotomy, with the dates of their introduction. That Robert Houston, of Glasgow, did attack a cystic tumor of the ovary in 1701, there seemed to be no doubt, and the woman lived thirteen years after the operation. The first systematic ovariotomy was performed by McDowell, of Kentucky, in 1809, and the operation was nearly as perfect as performed to-day. The paper closed with a consideration of the various conditions which influence success and failure, such as climate, avoidance of the operation in public hospitals, avoidance of septic diseases by the operator and his assistants, maintenance of strict cleanliness, etc.

The paper was discussed by Mr. J. Knowsley Thornton, of London, England, and Drs. H. P. C. Wilson, of Baltimore; G. H. Lyman, of Boston, and G. Kimball, of Lowell, Mass. Drs. H. P. C. Wilson, of Baltimore, and J. D. Trask, of Astoria, were appointed Auditing Committee, after which the Society adjourned to meet at 3 P.M.

Wednesday—First Day—Afternoon Session.

The Society was called to order by the President, and

Dr. Theophilus Parvin, of Indianapolis, read a paper on

THE CARE OF THE PERINEUM IN THE SECOND STAGE OF LABOR.

It had been shown by Duncan and Schroeder that in primiparæ some tearing of the vulvo-vaginal orifice was inevitable; only thirty-nine per cent. of women in their first labor, according to the latter, escaping rupture of the fourchette. Concerning the frequency of rupture, the statement that several hundred cases of labor had been attended without the occurrence of that accident could never be accepted, unless the person making it could also state that he had carefully examined the perineum in every case immediately after labor. The statistics of many obstetricians were then given, after which the author passed to the consideration of the causes, such as those relating to the pelvis, condition of the soft parts, etc. In order to reduce the accident to the minimum or prevent it, it was the duty of the accoucheur to hinder the abrupt expulsion of the head of the fœtus, and permit gradual dilatation of the passages which it traverses. The various methods recommended for accomplishing this were then considered. When rupture was otherwise inevitable, it had been proposed to prevent the accident by incision or incisions, but episiotomy should not be resorted to unless it was indispensable. Dr. Parvin advocated immediate closure of the rupture, should it occur, and the use of horse-hair sutures, which certainly were readily obtained, and probably were quite as good as any other material that could be used.

The paper was discussed by Drs. A. H. Smith, of Philadelphia; James R. Chadwick, of Boston; W. T. Howard, of Baltimore; Paul F. Mundé, of New York; and closed by Dr. Parvin.

The next paper was read by Dr. Fordyce Barker, of New York, on

LEUCORRHŒA: ITS CONSTITUTIONAL CAUSES AND THERAPEUTICS.

It seemed to the author of the paper that the fact that leucorrhœa was not a distinct disease, but a symptom of many different and even opposite pathological conditions, had led to a neglect of its study, and practically to a forgetfulness of the fact that it not rarely originates from constitutional causes, and that when long continued it becomes itself a cause of local and important pathological changes. No writer during the last quarter of a century had considered it, except incidentally, as a symptom of some local disease, with the exception of Comty Stoltz and Robert Barnes, who had called attention to some of its constitutional causes. This was equally true of American, English, French, and German gynecologists.

For many years he was an entire disbeliever in the opinion of Tyler Smith that leucorrhœa was in many cases the primary cause of morbid states of the os and cervix, and while now he was not at all disposed to accept the statement that this is the fact in the majority of cases, in the few last years he had been convinced that it was true in some. While all accept the statement that local and constitutional causes continue to develop leucorrhœa, yet he thought it might be questioned whether the latter be not too often disregarded in the present day, both in the diagnosis and treatment of this disorder.

Many of these constitutional causes, such as atmospheric changes, which induced general catarrhal affections, plethora in some, anæmia in others, all forms of defective nutrition and debility, etc., were well understood. The influence of nerve disturbance, as a consequence of defective nutrition, was, perhaps, not so generally appreciated, although most practitioners knew the fact that in some of their patients strong mental emotion was sure to bring on a troublesome leucorrhœa. Dr. Barker

then considered the bearing which certain anatomical facts, pointed out by Mayrhofer, had upon this disorder, namely, changes in the blood-vessels of the uterus produced by pregnancy. Leucorrhœa and its attendant symptoms was not at all rare in young unmarried ladies, and every year he was consulted concerning it, chiefly by those who came to the city "to finish their education," as it is termed. The moral depression from home-sickness and exhaustion of nerve-power, exercised in accustomed directions, seemed to him to be the most common of the constitutional causes of these cases. He suspected the most frequent error in the treatment of these cases was found in a disregard of the necessity of such remedial agents as would secure a healthy performance of all the organic functions, a neglect of the *morals*, and a routine prescription of some preparation of iron, which, under these circumstances, was sure to destroy the appetite and produce headache, etc.

Leucorrhœa, in consequence of parturition, and in women who had passed the climacteric period, was then considered, after which the paper was discussed by Drs. G. H. Lyman, of Boston; H. P. C. Wilson, of Baltimore; A. Reeves Jackson, of Chicago; Joseph Taber Johnson, of Washington, D. C.; A. H. Smith, of Philadelphia, and the President, and closed by Dr. Barker.

The Society then adjourned to meet on Thursday at 10 A.M.

THURSDAY, SEPTEMBER 21ST—SECOND DAY—MORNING SESSION.

The Society was called to order by the President, and the first paper was read by MR. J. KNOWSLEY THORNTON, of London, England, and entitled

THE RELATIVE VALUE OF HYSTERECTOMY AND OF THE COMPLETE REMOVAL OF THE UTERINE APPENDAGES FOR THE CURE OF UTERINE FIBROIDS.

Under the term "Hysterectomy" he included all cases in which the uterine cavity is laid open, more or less of its wall removed along with the fibroid. Whether one or both ovaries is removed is a matter of no consequence. He reserved the term "complete supravaginal hysterectomy" for cases in which the uterine appendages and vagina are removed, and it is therefore a combination of the two operations, which we consider as rivals to-day.

It was well known that yearly a very large number of women died from the direct or indirect effect produced by fibroid enlargement of the uterus. There were many also whose lives were constantly endangered, and many more whose lives were rendered so useless and their suffering made so severe that they were justified in taking the risks of having the operation performed.

The author of the paper considered solely those cases which could be best treated by abdominal section, if treated at all. The conclusion reached, after the presentation of statistics of different operations, was, that surgical aid was justifiable, even necessary in a certain number of cases, and yet there was the grievous mortality of somewhere between thirty and forty per cent. after abdominal section, and a still higher rate of mortality when the uterine cavity was cut into, or the supravaginal portion of the uterus was removed. Notwithstanding all the improvements, the operations of hysterectomy and complete supravaginal hysterectomy remained very formidable. But thanks to American surgery, the brilliant conception of Blundell, in 1823, was made a recognized surgical procedure by Battey in 1874, and from the labors of others he was able to present a perfected operation, which would render hysterectomy still less formidable than it had been.

The complete removal of the uterine appendages, when efficiently performed, cured fibroid of the uterus with a rapidity and certainty that Blundell in his most sanguine moments never dreamed of. Mr. Thornton then gave statistics of the operation, so far as he had been able to collect them, and showed that removal of the uterine appendages was attended by less immediate danger of life than other operations for the removal of uterine fibroids. The reasons for performing the operation were made apparent in the brief histories of eight successful cases which were given, and the condition of the ovaries was also mentioned. The remaining portion of the paper was devoted to the consideration of the selection of cases, and the method of performing the operation, which must be done thoroughly; mere removal of the ovaries being useless, still less useful the removal of a portion of them, thorough strangulation of the tubes and overies at their bases, antiseptic precautions, etc.

The paper was discussed by Drs. Goodell, of Philadelphia; Thomas, of New York; Kimball, of Lowell; Engelmann, of St. Louis; and closed by Mr. Thornton.

ANNUAL ADDRESS BY THE PRESIDENT.

The President, DR. THOMAS ADDIS EMMET, of New York, then delivered his address, in which, after making fitting reference to the death of Dr. James P. White, of Buffalo, one of the founders of the society, he proceeded to speak on a special subject, namely,

A NEW METHOD OF EXPLORATION, WITH THE PATHOLOGY AND TREATMENT OF CERTAIN LESIONS OF THE FEMALE URETHRA.

The general practitioner has yet gained but little knowledge pertaining to diseases of the female urethra. In fact, it might be held that the subject had remained to this day in as much obscurity for the profession at large as existed regarding uterine disease some forty years ago, before the introduction of Sims's speculum. Individuals doubtless had attained dexterity in the use of certain instruments, and had been fairly successful in the treatment, but the existence of a profound degree of ignorance had been the rule, and consequently much damage had resulted from the frequent confusion of cause and effect. We could scarcely credit the fact that the female bladder had been treated heroically for diseases, when the cause of the irritation was due to a fissure in ano. He had known of several instances where, with a pertinacity worthy of a better cause, the bladder had been injected with solutions of nitrate of silver, week after week, until at length cystitis became established. Many, with himself, had treated without success a supposed diseased condition of the bladder or urethra, when the seat of irritation existed in an unsuspected inflammation about the folds of the utero-sacral ligaments. He had opened the bladder, for supposed disease, by making a vesico-vaginal fistula, and subjected the patient to months of inconvenience from escape of urine, closed it, and reopened it, because of return of the symptoms, and finally found that the disease was urethral polypus, which the use of the endoscope,

in the hands of an expert, had failed to discover. Regarding the various means which had been heretofore proposed for examining the female urethral track as possessing but very little practical value, even in the hands of those most accustomed to their use, Dr. Emmet at once passed to the description of the new method of exploration, which formed the basis of his address.

It was some six years since he devised the plan of making a buttonhole-like opening in the female urethra for the purpose of making a diagnosis and also for facilitating any operative procedure. In the second edition of his book he had entered into the subject at considerable length, but during the last two years he had given it very careful study. The method described he regarded as the only one within our knowledge which fulfilled every indication, was safe, simple, and within the scope of any one possessing the least degree of surgical dexterity. It was as follows: administer an anæsthetic, place the patient upon the left side, and use a moderate sized Sims' speculum for bringing into full view the vaginal surface covering the urethral tract.

He had devised an instrument with which to make the opening into the urethra, but it had not been yet perfected to his satisfaction. It operated much on the plan of the ordinary scissors used for cutting buttonholes. The operation could be readily performed by means of tenaculum, knife, and straight-pointed scissors with a block-tin sound, of size sufficient to place the tissues upon a moderate stretch, within the urethra. The opening should be made in the median line, forward to within one-fourth of an inch of the meatus, and backward nearly to the neck of the bladder. The neck of the bladder should never be involved in the incision. The line along the vaginal surface should be nearly one-third longer than the one through the urethral mucous membrane, and it was important that the chief difference should be at the end of the line from the neck of the bladder. If the opening was simply for exploration, it might be closed without delay, as in vesico-vaginal fistula. The advantages claimed for the method were that the whole of the canal could be fully exposed; that it was safe, and could be applied by any one possessing ordinary surgical dexterity; that, if properly performed, control over the urine will not in the slightest be impaired; that no difficulty has been experienced in closing the urethral opening afterward; and that no difference has been appreciated in the passage of the urine after the operation. It is not intended to supercede the formation of a vesico-vaginal fistula for the treatment of cystitis or removal of stone.

The paper was discussed by Dr. Barker, of New York, who referred to cases in which Dr. Lusk, of New York, had performed this operation with the most gratifying results.

Dr. A. J. C. Skene, of Brooklyn, was unable to accept the President's unqualified condemnation of all other methods of exploring the female urethra, and took issue with several statements, believing that there was no disease which could be diagnosticated with more certainty than cystitis and diseases of the urethra, with one exception, and that was polypus or any neoplasm. Other than that our means of diagnosticating urethral diseases were as accurate as those we now had for recognizing lacerations or inflammation, or fissures, as explained by Dr. Emmet.

After some further remarks and discussion, the Society adjourned to meet at 3 P.M.

Second Day—Afternoon Session.

The Society was called to order at 3 o'clock, Dr. G. H. Lyman, of Boston, first Vice-President, in the Chair.

The first paper was read by Dr. T. G. Thomas, of New York, and entitled

NOTES OF TWENTY-ONE CASES OF EXTRA-UTERINE PREGNANCY.

Until the last decade very little special attention had been paid to the clinical study of extra-uterine pregnancy. During the last ten years this has been changed chiefly through the labors of Bandl, Barnes, Hecker, Schroeder, Spiegelberg, and Hennig, in Europe, and Parry, Allen, Goodell, Reeve, Wilson, and Lusk, in this country. But despite all this advance, our knowledge of the subject is still very elementary, our means of diagnosis still uncertain, and our methods of treatment unsettled.

The paper was based upon twenty-one cases which he had been called upon to treat within the last fourteen years.

As to the treatment, no one at present could speak dogmatically, and he simply gave the rules which his experience induced him to adopt.

First.—If the diagnosis be well settled before the fourth month of gestation, he would destroy the life of the fœtus by electricity in preference to all other methods.

Second.—Should the fourth month of gestation have passed and surgical interference be called for, laparotomy or, with the tumor low down in the pelvis, elytrotomy should be preferred to electricity.

Third.—Should the pregnancy be abdominal, the practitioner might watch and wait until full term, and deliver by laparotomy or by elytrotomy and the forceps, or manual delivery.

Fourth.—Should the full term be passed and the fœtus be dead, wait and watch and aid nature when she demonstrates the outlet by which she desires extrusion to be effected. If bad symptoms under these circumstances at any time develop, perform laparotomy under strict antiseptic precautions.

Fifth.—Should rupture of the fetal nest have occurred before diagnosis have been fully made, wait and see whether nature is powerful enough to overcome shock, to control hemorrhage, and further, if the patient is going to escape the dangers of peritonitis and septicæmia. If these favorable results do not occur, if hemorrhage is about to destroy the patient immediately, or if septicæmia attacks her later, laparotomy, followed by antiseptic cleansing, should be promptly adopted.

Dr. H. J. Garrigues, of New York, then read a paper on

ELECTRICITY IN EXTRA-UTERINE PREGNANCY.

The paper was prepared with special reference to one point, namely—treatment. The author first gave the history of the case which had come under his care. The treatment was by the use of electricity, a single-celled French apparatus being used. The applications were made daily, and continued ten minutes at each sitting. Ten applications were made.

With reference to diagnosis he thought the difficulty was no greater than in normal pregnancy.

As to treatment, so far as killing the child was concerned, five methods were at our command, which could be conveniently grouped under two heads:

First.—Sharp instruments introduced through the vaginal wall or through the roof of the vagina; in the second way no external part of the body is wounded; the first comprises puncture, injection, elytrotomy, and laparotomy.

Second.—Dilatation and electricity. The author gave a careful discussion of the advantages and disadvantages of these methods, and reached the following conclusions:

First.—Experience has proved electricity to be an efficacious and safe agent to arrest extra-uterine pregnancy during the first three months, and perhaps after the pregnancy in some cases has advanced more or less into the fourth month.

Second.—It seems likely that the same agent may be profitably used at any period of fetal life.

These papers were discussed by Drs. H. F. Campbell, of Augusta, Ga.; Wilson, of Baltimore; Goodell, of Philadelphia, who gave a brief history of thirteen cases which had come under his observation; A. H. Smith, of Philadelphia; Lyman, of Boston; Howard, of Baltimore, and Mr. Thornton, of London.

The Society then adjourned to meet on Friday at 10 A.M.

FRIDAY, SEPTEMBER 22D—THIRD DAY—MORNING SESSION.

The Society was called to order by the President.

DR. THOMAS, of New York, was elected to prepare a memoir of the late Dr. James P. White.

DR. A. H. SMITH offered resolutions complimentary to the services of the late Secretary, Dr. Jas. R. Chadwick, which were unanimously adopted.

The first paper was read by DR. SAMUEL C. BUSEY, of Washington, D. C., and entitled

THE INFLUENCE OF HIGH-HEELED FRENCH SHOES UPON THE FEMALE FORM AND UPON THE RELATIONS OF THE PELVIC ORGANS.

The first part of the paper was historical. This style was introduced under the regency. Under Louis XIV. the heel was high and circular, but not oblique. During the reign of Louis XVI. this objectionable style began to disappear, but has been again revived and is, perhaps, more general now than at any previous time.

Age, pregnancy, and maternity were manifest and admitted agencies in the causation of deviation of the female form. Stature and the habits of posture and carriage were perhaps equally potential. Asymmetry, either connate or acquired, was the most common of physical defects. Paget has supplied the following description of a perfect female foot: "Great breadth and fulness of instep, a well-marked toe, a long second toe, projecting a little beyond the great toe, and a very small or, in some cases, almost suppressed little toe." From this point the author entered into a minute description, with illustrations, of the mechanical construction of the normal human foot, and then placed in comparison the malformed foot as produced by wearing improperly shaped shoes.

The physical well-being of the feet is a necessary and important part of the general sanitation of health. Pedestrian exercise is the great promoter and conservator of functional activity and constitutional vigor. To enjoy it, and to realize the benefit to the fullest extent, the feet must be healthy and the foot tackle free and easy. Sore, contracted, and crippled feet, strained and stiffened joints, altered and displaced articulating surfaces, restrained mobility, and alteration of the line of gravitation (any one or all of which results may find their cause in too early and too constant use of high-heeled shoes) impede and augment the fatigue of locomotion, and make walking exercise painful. *Per contra*, they conduce to the acquirement of ungainly habits of carriage; to disproportion of the component parts of the body; and to a sedentary life, with its manifold disturbances of the animal economy. The injuries, however, are not confined to the feet.

Dr. Busey then demonstrated the normal position of the uterus in the pelvis, and answered the question, "How are these relations of the natural conformation influenced by the excessive and constant elevation of the heels by the use of high-heeled shoes?" The answer involved the study of the natural curvatures of the body and the deflections consequent upon the primary deflection of the line of gravitation taking place at the base. It was easy to comprehend how the general health might be influenced by such functional and local disturbances, and when such conditions existed in women, where the nervous systems were always waiting for an opportunity to be troublesome, the pathological consequences might be serious.

The paper was discussed by Drs. Barker and Thomas, of New York, who had been unable to trace any serious results upon the pelvic organs of the female arising from wearing high-heeled shoes.

Dr. Busey exhibited photographs illustrating the position of the limbs and trunk with and without high-heeled shoes, and maintained that the axis of the pelvis was changed by elevation of the heel and inferred that the position of the uterus and other organs was changed in like manner.

AMENDMENT TO THE CONSTITUTION AND BY-LAWS.

THE PRESIDENT introduced amendments to the fourth clause of the fourth section of the By-Laws, and the third clause of the fourth section of the Constitution, so that it will read: "Candidates shall be proposed to the council one month before the first day of the meeting by two fellows, and shall be balloted for at the following annual meeting, a list having been sent to each fellow, with a notification of the time of the meeting."

DR. T. M. DRYSDALE, of Philadelphia, then read a paper on

THE OVARIAN CORPUSCLE: ITS ORIGIN AND CHARACTERISTICS.

It was in reply to a paper read by Dr. H. J. Garrigues, of New York, at the last annual meeting.

Dr. Drysdale's views are that the cell called the "ovarian granular cell" is almost invariably found in the fluid of ovarian cysts; that it is distinguished from other cells by its appearance and by its behavior with acetic acid; that it has been so named to distinguish it from all other cells found in abdominal dropsical fluids, not meaning to assert that it may not be found in cysts in other parts of the body; that when found in this locality it is pathognomonic of ovarian disease; that it differs from any other known granular cell found in this abdominal cavity, and by means of reagents can be readily recognized.

On the other hand, Dr. Garrigues claims that the bodies found in ovarian fluids and known as Drysdale's corpuscles are not cells, but are only nuclei; that in appearance they are entirely like the pyoid bodies of Lebert, described as early as 1846, and can be found in various parts of the body; that in

ovarian fluids these bodies were first described by John Hughes Bennett, in 1852; that they are not pathognomonic of ovarian nor any other cysts that may be found in various parts of the body. All these points were discussed at length.

The discussion was opened by MR. THORNTON, of London, who thought there was not at present any basis to stand upon concerning the origin of the ovarian cell, because of the very great difference of opinion among expert observers as to what a cell is and how it grows. Although he had not devoted special attention to the subject for some time, he long ago reached the conclusion that the nucleus perhaps was the first and not the last element, and that the cell was developed afterward. Of course that view struck at the basis of much that Dr. Drysdale had said with regard to the origin of the cell in question. Whether it was called a cell or not, he had, long before Dr. Garrigues read his paper, concluded that it was a nucleus of a rapidly degenerating cell of the cyst membrane. With reference to the question of the action of reagents, upon which Dr. Drysdale relies so much, it seemed to him that the reaction, or rather the want of reaction, in his cell was in favor of the view that it is a degenerating cell, and not, as he (Dr. Drysdale) seemed to think, an immature cell; because in immature, rapidly growing cell-substances protoplasms of embryonic character, there existed a special proneness to take on the action of staining and other agents. Concerning the question of diagnosis, he had some time ago reached the conclusion that the cell had no practical value—at least for himself.

DR. ENGELMANN, of St. Louis, thought that the ovarian corpuscle was not unlike the syphilitic corpuscle in practical value and destination.

The discussion was closed by DR. DRYSDALE, who said that he had quoted from the latest observations made by Carpenter, Max Schultze, and others, as to what constitutes a cell. As to regarding the body as a nucleus, he would have done so twenty years ago, but continued study had convinced him that it was a cell—an aborted, epithelial cell. The fact that other gentlemen had not seen it was no fault of his, and he himself had made serious mistakes concerning it when he had not given fluids a sufficiently careful examination.

The Society then adjourned to meet at 3 P.M.

THIRD DAY—AFTERNOON SESSION.

The Society was called to order by the President, and DR. E. VAN DE WARKER, of Syracuse, read a paper on

THE MECHANICAL THERAPEUTICS OF VERSIONS AND FLEXIONS OF THE UTERUS.

The author united the historical part of the subject with a consideration of certain fixed principles which govern the constructive application, mechanically speaking, of instruments designed to correct versions and flexions of the uterus. The mechanical therapeutics of uterine displacements was yet unsettled. No department of gynecology was more interesting, and no department in general surgery had stimulated greater inventive activity. It was doubtful if, in the entire range of gynecology, a subject could be brought up which would elicit such hostile criticism upon one side, and such hearty approval on the other, and for this there must be some reason. It was possible that this difference of opinion came from over-confidence in methods and instruments, as pessaries could no more be blindly relied upon than could a mere splint for a fractured limb. The instrument, in common with all others, required to be used with watchfulness, and such changes made in it as adapted it to the conditions which first demanded it and subsequently appeared in the course of its use.

Do pessaries accomplish what they are designed for? was the question Dr. Van de Warker asked, and its consideration from a purely mechanical standpoint constituted the basis of his paper. His opinion was that the uncertainty in the results obtained by the use of pessaries came (1) from expecting too much of the instrument, and (2) from selecting an imperfect agent for want of more clear ideas of the absolute limitations imposed upon the action of pessaries, and which must govern the mechanical results to be expected. Two things must be clearly defined: 1, the limits imposed by the uterus and its appendages upon the mechanical agencies acting upon it, and, 2, the action of the mechanical forces under these limitations. These limits, both in their mechanical and uterine relations, were fixed and absolute, and were not to be evaded by skill or ingenuity, and ought to be clearly understood. One was, however, reluctantly forced to conclude that the majority of pessaries were invented either in ignorance or defiance of these limits, and as if the only restriction upon their action was that of gravity.

The paper was illustrated by tracings made with the mercurial manometer, showing the movements of the uterus in respiration, forced respiration, coughing, speaking, walking, etc., and was also extensively illustrated with woodcuts. It was discussed by Drs. Campbell, of Augusta, Ga.; Wilson, of Baltimore; Mundé, of New York; Lyman, of Boston, and the discussion was closed by Dr. Van de Warker.

On motion by Dr. Wilson, of Baltimore, the sympathy of the Society was extended to Dr. Humphrey Storer in his sickness, with an expression of hope that he might be restored to health.

The retiring President then made a few appropriate remarks, after which he introduced the President-elect, Dr. Gilman Kimball, of Lowell, Mass., who thanked the Society for the unexpected honor it had so generously conferred upon him.

After votes of thanks to the retiring officers and to the gentlemen who had so cordially entertained the members and invited guests, the Society was declared adjourned, to meet in Philadelphia on the third Tuesday in September, 1883.

The following officers were elected for the ensuing year: *President*—Dr. Gilman Kimball, of Lowell, Mass. *Vice-Presidents*—Dr. A. H. Smith, of Philadelphia, and Dr. Theophilus Parvin, of Indianapolis. *Council*—Drs. Byrne, of Brooklyn; Howard, of Baltimore; Jackson, of Chicago, and Campbell, of Augusta, Ga. *Secretary*—Dr. Frank P. Foster, of New York. *Treasurer*—Dr. Paul F. Mundé, of New York. *Active Members*—Dr. Matthew D. Mann, of Buffalo, N. Y., and Dr. W. H. Baker, of Boston. *Honorary Members*—Mr. Lawson Tait and Mr. J. Knowsley Thornton, of England.

The following papers were read by title: "A New Operation for Ruptured Perineum," by Dr. J. C. Warren, of Boston; "Measurements of the Uterine Cavity in Childbed," by Dr. W. L. Richardson, of Boston.

PROFESSOR ERB, of Leipzig, has been called to the late Professor Friedreich's chair at Heidelberg.

Correspondence.

PERCENTAGE OF COLLEGE-BRED MEN AMONG MEDICAL STUDENTS.

To the Editor of The Medical Record.

Sir: The editorial article entitled "The American Medical Student," published in your issue of February 11th, could not fail to attract the attention of all interested in medical education. There was, however, an error in the statement as to the proportion of medical students who were college graduates, resulting from the mode in which the result was arrived at in consulting the Report of the Commission of Education for 1879. Thus it is stated in the editorial "that the per cent. of college-bred men in the Harvard Medical School is nearly fifty. That in the Kentucky schools it is zero. Among Missouri's seven hundred graduates two had received a classical education. New York's per cent. is about seventeen; that of Illinois sixteen; that of Pennsylvania eight, and that of Ohio six, these being only approximate figures." I was much struck by the small percentage of Pennsylvania, put down at eight, knowing that in the medical department of the University of Pennsylvania for that year the proportion of students who possessed college degrees was twenty-two per cent.

Desiring to make some use of the facts in an address I was then preparing, I wrote to General John Eaton, the Commissioner of Education, for further information. With his usual promptness he wrote me immediately as follows: "It is hardly correct to say that my report for 1879 gives this proportion (for Pennsylvania) as eight per cent. The summary of statistics of regular medical schools shows that there were one thousand and thirty-one students reported by the institutions of this class in Pennsylvania, and that but eighty-two of these were reported as being college graduates. By a reference to Table XIII., page 590, of the same report, it will be seen that only one of the institutions called regular, namely the medical department of the University of Pennsylvania, reported the number of students who had received such degrees. Doubtless there were many graduates in medical colleges which did not report the item, so that the percentage of students of medicine in Pennsylvania in that year who had received such degrees would be much larger than eight per cent."

In like manner, in the State of New York, the same tables show the total number of students to be 1,976, and of those who possessed degrees in arts or sciences 310, or about sixteen per cent. But of the New York medical colleges, only the medical department of the University of Buffalo, the College of Physicians and Surgeons, the medical department of the University of the City of New York, the Woman's Medical College, and the College of Medicine of Syracuse University report the number of students possessing collegiate degrees, while Bellevue Hospital Medical College, the Albany Medical College, and the Long Island Hospital College do not report.

I have not taken the trouble to examine farther, but it is likely that the same omission to report has operated to affect the ratio in other States.

There is no doubt but that most important results will accrue in the course of time from the accumulation of such statistics as Mr. Eaton is annually collating. While it is certain, also, that their value will be much less if institutions are not willing to take the trouble to make the returns now rendered so easy by the blanks annually distributed by the Bureau of Education at Washington.

James Tyson.

Philadelphia, September 1, 1882.

RELATIVE MORTALITY OF CITY AND COTTAGE HOSPITALS.

To the Editor of The Medical Record.

Sir: My attention has been called to an article in the Medical Record of the 16th instant with the above title, which is based upon a paper of mine read recently before the Statistical Society in London, England. I notice that by a printer's error my name is given as Burnett instead of Burdett. I further desire to point out that the writer has fallen into an error, probably due to the fact that the whole of my paper and statistics were not reproduced in the *Medical Press and Circular*, in supposing that my figures relate to a period prior to ten years ago. The figures given are brought down to the end of 1879 in some cases, and to 1880 in others. I further proved by statistics that if the latest German figures are to be accepted, as I believe they may safely be, that the Listerian system of treating open wounds and cases of operation has practically settled the vexed question of the relative mortality after amputation in city and cottage hospitals, because the size of the building has ceased to be an all-important feature in the controversy. This is proved by the statistics given in my paper, which show that a mortality after operations of 41.6 per cent. in England; of 58.8 per cent. in Paris; of 43.3 per cent. in Edinburgh; and of 34.1 per cent. in Glasgow fell in Professor Erichson's case at University College Hospital to 25.7 per cent.; in the return of all the cases of which a detailed history could be obtained up to the end of 1879 in cottage hospital practice to 18.6 per cent., and at the leading German hospitals under the aseptic of Listerian system, according to Schröde, whose figures are brought down to the end of 1880 to less than 5 per cent.

I am paying a short visit to America, and so I cannot send you a copy of my paper, but this I will take care to do on my return home.

I am, etc.,

Henry C. Burdett.

New York, September 25, 1882.

The Summer Corps of Physicians.—Assistant Sanitary Superintendent Janes has presented to the Board of Health the final report of the entire work performed by the summer corps of physicians during the five weeks ending September 4th. From this report the following is taken: Number of houses visited, 26,883; families visited, 153,983; patients treated, 3,671; patients revisited, 662; circulars distributed, 23,111; excursion tickets, 4,802. Of the cases treated 2,186 were diarrhœal, 472 were pulmonary or bronchial, 238 were contagious, and the remainder were miscellaneous. The free excursion on the Floating Hospital of St. John's Guild have, it is believed, proved an important auxiliary to the efforts of this department toward promoting and preserving the health of the tenement-house children.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 23, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 16, 1882.	0	26	18	4	4	26	0	0
Sept. 23, 1882.	1	26	29	5	7	28	1	0

THE WONDERFUL DISCOVERIES OF MICROSCOPISTS in the field of pathology and food adulteration are wittily commented upon in the *New York Times*. The author describes a dinner given to a number of microscopist experts:

"When the microscopists sat down to dinner, each one produced his compound oscillating microscope and carefully examined every article of food. Excited shouts went up as new discoveries of metallic, vegetable, and sausage substances were discovered in the soup. An examination made of the water resulted in the discovery of such an enormous quantity of infusoria, mammalia, and pachydermata that the microscopists unanimously refused to drink it. During the progress of the meal, much enthusiasm was aroused by the announcement of Prof. White that he had discovered a trace of hairpin in the beefsteak, thus upsetting the theory that the beefsteak of American hotels is a chemically pure carburet of sole-leather, and, at a later hour, Prof. Black's assertion—based on a thorough microscopic examination—that he had discovered whortleberries in the whortleberry pudding, and wine in the wine sauce, led to a heated discussion, in the course of which thirty-eight microscopists declared that Prof. Black was an ignorant and unprincipled pretender, and eleven others maintained that the Professor was acting in good faith, and that his discoveries could be accounted for on the theory that the waiter had given him by mistake a piece of whortleberry pudding made expressly for the landlord's private table."

HOMŒOPATHY IN THE COOK COUNTY HOSPITAL, CHICAGO.—Under recent rules, one-fourth of all patients on the medical side, and one-fifth of the surgical cases are placed under the care of the homœopathic internes. No consultations allowed.

THE COMPOSITION OF PREPARED FOODS AND FLOURS, as given by Dr. E. Cutter, seems to have received a too hasty endorsement in some quarters. Professor Albert R. Leeds, Public Analyst and Professor in the Stevens Institute, denies the correctness of many of Dr. Cutter's statements. We quote a few of his criticisms:

"Fine granulated wheat: said by Dr. Cutter to 'contain no gluten.' Analysis shows it to contain 13.62 per cent. of albuminoids, chiefly gluten. Franklin flour: Highly extolled by Dr. Cutter. 'A blessing to mankind.' It contains 8.55 per cent. of albuminoids, chiefly gluten, together with a very large proportion of cellulose or finely ground bran. It is greatly lacking in nutritive elements. Cold blast flour: said by Dr. Cutter to 'contain no gluten.' It contains 16.74 per cent. of albuminoids, chiefly gluten, and is very rich in nutritive elements. Arlington wheat meal: said by Dr. Cutter to be 'rich in gluten and all the elements of entire wheat.' I have found no wheat flour as poor in albuminoids as this."

Will not Prof. Leeds now give us his analyses?

THERAPEUTICAL NOTES.—A pomade of muriated tincture of iron (1 to 15) is useful in psoriasis and eczema of the scalp.

Pyrogallic acid pomade (1 to 10) has similar uses.

Iodoform is a new treatment for infantile convulsions.

Phenate of soda, 25 parts, glycerine 100, cologne 75, water 300, makes a good lotion for prurigo.

The pulse plant *lathyrus sativus*, from its known power of producing rigidity of the limbs when mixed with wheat flour in bread, is suggested as of probable benefit in paralysis.

Ext. of ergot. fluid, ℥ 40; acid carbolic, ℥j.; aqua, ʒjss., may be used as a throat spray every half-hour in tonsillitis.

Acid salicylic 3 parts, starch 10, powdered talc 87, is used as a foot-powder in the Russian army; it prevents perspiration and sore feet. A strip of sticking-plaster worn for a few days will cure a patch of foot-soreness.

Alstonia constricta (the Australian fever tree) is reported as combining the effects of quinine and nux vomica as a cerebro-spinal stimulant and tonic in typhoid and puerperal fevers and nervous depression.

A French practitioner describes a new febrifuge, borate of quinoidine. It is one-tenth cheaper than quinine, but of only half its therapeutic power, requiring twice the dose of the latter.—*Australian Med. Journal.*

CONTAGIOUSNESS OF PHTHISIS.—Dr. Vincent Edwards, for seventeen years resident medical officer at Brompton Hospital for Consumptives, gives the following facts telling against the asserted contagiousness of consumption: Of fifty-nine resident medical assistants who lived in the hospital an average of six months each, only two are dead, and these not from phthisis. Three of the living are said to have phthisis. The chaplain and the matron had each lived there for over sixteen years. Very many nurses had been in residence for periods varying from months to several years. The head nurses, says the writer, sleep each in a room containing fifty patients. Two head nurses only are known to have died; one from apoplexy; the other head nurse was here seven months, was unhappily married, and some time afterward died of phthisis. Of the nurses now in residence, one has been here twenty-four years, two twelve years, one eight years, one seven years, one six and a half years, and one five years. No under nurse, as far as I am aware, has died of phthisis. All the physicians who have attended the in and out patients, during the past seventeen years, are living, except two, who did not die from phthisis.

MR. HENRY C. BURDETT, the author of "Cottage Hospitals and the Pay Hospitals of the World," is on a short visit to this country, for the purpose of studying the management of several of our larger medical charities. We bespeak for him a hearty welcome, especially from such as are interested in the work which he has so long and so satisfactorily pursued.

Poisonous Colors in Food Articles.—The German Government has just laid before the Reichstag a decree prohibiting the use of poisonous colors for the coloring of certain alimentary substances and food articles. The following articles are prohibited: antimony (oxide of antimony), arsenic, barium (except the sulphate), lead, chromium (except chromic oxide), cadmium, copper, mercury (excepting annabar), zinc, tin, gamboge, picric acid.

Revulsives.—During my recent trip through portions of Mexico, some peculiar practice was observed. Being ever ready to absorb any new crumbs of science, prompted me to travel through that strange country with eyes wide open. The natives have a very successful mode of allaying or mitigating pain—the old theory of "revulsion" put into thorough practice. Several severe headaches were quickly relieved by rapidly chafing or scratching some remote part of the body. Stomach-cramp was apparently thoroughly relieved by rapidly scratching the arm of the patient, and a child, suffering with extremely painful ophthalmia, was quickly lulled to sleep by rubbing the feet and limbs with a soft silk handkerchief.—*Chicago Medical Times.*

Midwifery in the Sandwich Islands.—The brother (non-medical) of one of the members of the British Medical Association resident in Honolulu gives the following description of the *modus operandi* of the Hawaiian midwife: "The midwives here are for the most part men—usually old men. When the woman's time draws near and labor commences, she is placed, sitting, on a man's knees with her back to him. He then clinches his hands over her abdomen, and with all his strength hugs the woman to him, until the child is actually forced into the world, falling to the floor between the operator's feet. The umbilical cord is then cut, and always left very long. Then the woman is placed upon her feet, and the midwife takes her tongue and draws it steadily until she gulps, or retches, this action causing the prompt ejectment of the after-birth. After this she goes and flounders about in the sea, and returns to land, ready for such domestic duties as may fall to her lot or inclination. Native children are—as may be inferred from the way in which they are introduced to existence—very easily born; but should the baby stick at all, or make any bother about being born, then the mother knows it is going to be half white, as this latter kind of baby is so much bigger in the forehead. It is a wise child that knows its own father in this country. So well recognized is this fact that natives never ask, 'Who is your father?' but only, 'Who is your mother?' when they desire any acquaintance with one another's genealogy."—*British Medical Journal.*

What Church is It?—Mr. Geo. C. Booth recently said that "the wealthiest and most prominent church corporation in New York City has scores of tenement houses which are in a most foul condition, and that the church corporation exacted last May ten and fifteen per cent. increase of rent under pain of eviction, instead of spending some thousands out of its millions in remedying such monstrous evils."—*Medical News.*

Tuberculous Diseases from Tuberculous Nurses.—"Inquirer" writes: "Your editorial of September 9th on 'Literature of Tubercle' leads me to ask if it is not overlooked that we have right around us millions who have been nursed by tuberculous mothers, and that (as I see the question) this is a source for the most reliable and most easily reached statistics upon the main question of the effect of ingestion; and I have no doubt a multitude could be found, not inheriting tubercules, but having had nurses who were tuberculous. It seems to me that, so far as ingestion affects the matter, every phase of it can be shown by statistics taken in this manner most easily."

A Hitherto Unpublished Work on the Brain, by Swedenborg, has been translated into English by Professor Tafel.

Dr. Wm. B. Carpenter, of London, is visiting this country. He was present at the Unitarian Conference in Saratoga, and on September 20th delivered a speech on "The Influence of Science upon the Progress of Religious Thought."

American Academy of Medicine.—At a recent meeting of the Council the annual meeting of the Academy was postponed until Thursday, October 26th, when it will take place at Philadelphia, at the time of the Bicentennial Celebration in that city.

Prince Leopold, who has long been an invalid, is said to suffer from a liability to hemorrhages—hæmatophilia.

American Doctors.—Mr. W. H. Rideing, in an article on Medical Education in New York, in *Harper's Monthly*, for October, says: "It would be difficult and hazardous to state the precise condition of medical science in America contrasted with the science abroad, but it may be said with entire veracity that no occupation in the United States stands higher numerically, socially, or financially, than the medical profession. It may be added also that the facilities presented in New York for a medical education are such that a student finds no urgent necessity to cross the Atlantic in search of professional knowledge, and that the most successful members of American faculties are the graduates of American colleges." The above is very true; only we fear that Mr. Rideing overrates the difficulty of stating the comparative condition of medical science in America and Europe.

Therapeutic Memoranda.—When arsenious acid is kept in solution it is liable to oxidize to arsenic acid, which is less potent.

Dr. Magilot considers that an osteo-periostitis of the alveolar border of the jaw is a constant, early, and pathognomonic sign of diabetes.

Extract kava kava fluid, in twenty-drop doses three or four times a day, is recommended in gonorrhœa.

Dr. Weir Mitchell is an advocate of the skim milk treatment in Bright's disease. He gives eight to ten pints daily and nothing else.

Galattofore is reported to be a new and effective galactagogue. Two tablespoonfuls in a pint of water in divided doses during the day.

A French practitioner claims capsicum as an emmenagogue, and as of similar properties to ergot. The tincture is given in small doses every two hours. It is also useful in pulmonary hemorrhage.—*Australian Med. Journal.*

Enteric Fever and Dysentery in Egypt.—Several deaths have occurred among sailors and marines at Alexandria from enteric fever, and Captain Baines, of the 75th Regiment, has fallen a victim to dysentery.

The Most Recent Instance of Cremation is that performed by Dr. Gaetano Pini, of Milan, on the body of M. St. Cyr Jullien, a deceased French gen-

tleman, whose brother is a consul in England. The cremating process in the Milan furnace took two hours, and double that time was necessary for cooling the ashes. Among them could still be observed the teeth, and fragments of bone also. The cost of the cremating process came to $50.

During the past few years 5,000 persons have joined the cremation societies, which have been formed in twenty-two of the principal cities of Italy, including Rome, Venice, Turin, Genoa, Milan, and Bologna. Of the number who have been actually cremated, the annual increase in Milan alone has been as follows: In 1876 there were 2; in 1877, 9; in 1878, 14; in 1879, 25; in 1880, 40; in 1881, 70; and thus far in 1882, that is to June, there have been 36, making a total of 196, of whom 123 were men and 73 women.

A National Examining Board.—Navis, Medical Inspector, U. S. Navy, writes:

"Sir: Had your hypercritical correspondent of the navy *carefully* read my letter he would have found that the 'reflections' of 'Hesperus' and others had *not* been 'coolly appropriated by Navis.' The necessity for national medical examinations had long been canvassed in the leading medical journals, and the subject was so familiar to the profession, that I merely expressed my opinion that there appeared to be 'no good reason why a national medical examining board should not be immediately organized.' I am not egotistical enough to believe, with your correspondent, that 'this scheme of forming general examining boards from the army and navy is the *only* one that promises the least hope of success,' though I commended the selection of members from the medical corps of the army and navy. I agree with the *Lancet* that "we are not quite clear that army and navy surgeons would have the necessary knowledge of detail to make good examiners," and for this reason I suggested that 'the American Medical Association—representing the profession in the United States—be empowered to select or elect medical men of known ability to serve as civilian members of such examining board.' This would form a representative and impartial body of government officers and civilians, which might be divided for convenience into smaller boards, so that yearly examinations could be held about the same time in the North, South, East, and West."

A Fortunate Hospital.—The Philadelphia Hospital had a considerable tract of land in Pennsylvania devised to it many years ago. It had been considered, however, of little value, and had furnished it no income. Recently, report states that oil has been found, and that the property is worth thousands of dollars.

Discountenancing Samaritan Societies.—The Berlin physicians have, so to speak, sat upon Professor Esmarch, on account of that gentleman's activity in the matter of Samaritan, or First Aid to the Injured Societies. A resolution has been adopted by the central committee of the Berlin Society of Physicians, to the effect, that in their opinion, Samaritan societies, although theoretically beautiful, practically are a useless and mistaken form of philanthropy. A letter has also been written in answer to Esmarch's.

Tabes Dorsalis Produced Artificially by Ergot.—Dr. Franz Tuczek had an opportunity, in 1879, to study an epidemic of ergotism, the cases being brought to the clinic at Marburg. In many there were mental disturbances with epileptic seizures. These cases all showed plainly symptoms of ataxia: inco-ordination, parasthesia, pains, complete absence of tendon-reflex. In four, upon whom post-mortems were made, there were no brain-lesions, but the posterior root-zones showed sclerosis; the posterior roots were also affected, but not the columns of Goll. Attempts were made to produce tabes by feeding animals with ergot. Mice and hens rapidly died with fatty degeneration of the internal organs; rabbits thrived upon it even in large doses; cats and dogs emaciated rapidly, and showed signs of inco-ordination, but on post-mortem no lesion of the nervous centres was found. Ergot in man seems to be "homœopathic" to tabes. We hope our homœopathic friends will not come out now and say that they knew it long ago, and have been curing tabes right and left with ℥ x. and think nothing of it.

A Society for the Erection of Sea-side Hospitals for Children has been organized, and has already one hospital built.

A Clinic for Nervous and Mental Diseases has been organized at the University of Leipzig.

Bright's Disease.—An old lady, who lives in Massachusetts, heard that Mr. John Bright was going to visit this country. "Well," said she, "I hope he won't bring his disease with him."

Medical Registration in Oregon.—The Oregon State Medical Society at its recent meeting adopted the draft of a law providing for the proper licensing and registration of physicians. It is to be recommended to the next Legislature.

The Indiana Medical Journal is the title of a new semi-monthly journal of medicine and surgery, edited by Dr. F. C. Ferguson, and published in Indianapolis. It starts with a good prospect of success.

To Abort Styes.—Dr. J. P. McGee recommends small doses of belladonna and calcium sulphide every hour. This method will abort them in three cases out of five, if began early.—*Philadelphia Reporter.*

New Marine Hospitals.—Commissioners have been appointed by the Acting Secretary of the Treasury to select sites for marine hospitals at Baltimore, Cincinnati, and Cairo.

A Prior Claim for the Discovery of the Bacillus of Tubercle.—Dr. J. M. Blaisdell, of Bangor, Me., writes us that on April 4, 1878, he published in the *Macomb* (Ill.) *Journal* a description of the bacilli of tubercle, and claimed then that they were the cause of phthisis. In this article he says:

"Thus it seems to us, that pulmonary consumption has its origin in the little vegetable germs or spores, with which our atmosphere is constantly impregnated; so inconceivably minute indeed as to be only 1-4000th part of an inch in diameter, yet capable of producing the most alarming and serious results."

Klebs did not publish his discovery until the following year, hence, Dr. Blaisdell claims a priority.

The only objection to Dr. Blaisdell's claim is that when his article was published he did not say how he discovered his bacilli, nor did he figure them or in any way prove that they were not ordinary bacteria. Such, at least, is the opinion we draw from the extracts which he sends us.

AN ANCIENT GYNECOLOGIST.—Archigenes, a distinguished Greek gynecologist, who lived about A.D. 50, used and described the vaginal speculum and also sponge-tents. He operated for atresia vaginæ, and recognized and treated pelvic abscesses. He treated procidentia uteri by posture and astringent tampons, used a reed catheter for the bladder, and performed embryotomy, using the scalpel, volsella, tractors, and bone forceps.

So says Dr. Maughs, of St. Louis, who quotes from a Latin translation of the works of Oribasius of the fourth century, and Ætius of the sixth.

NATIONAL MEDICAL AND SANITARY EXHIBITION.—The meeting of the American Public Health Association at Indianapolis, next October, is to be made the occasion for considering the holding of a National Medical and Sanitary Exhibition in 1883. A call has been issued to secretaries of State Boards of Health, requesting them to appoint commissioners to meet at Indianapolis to discuss this subject. It is signed by many prominent medical men.

ARMY AND NAVY HOSPITAL AT HOT SPRINGS, ARK.—At its last session Congress appropriated $100,000 for the erection of an Army and Navy Hospital at Hot Springs, Ark., to be built in accordance with plans and specifications to be prepared by the Surgeon-General of the Army and Navy. Surgeon J. S. Billings has been ordered to go to Hot Springs, and, in company with a medical officer of the Navy, to be detailed for that purpose, to select a site for this hospital.

DEATH IN A DENTIST'S CHAIR FROM CHLOROFORM.—A lady living in Dunnville, Ontario, died in a dentist's chair on September 11th, while under the influence of chloroform, which had been administered by her physician for the purpose of having some teeth extracted.

HYDROCEPHALUS FOLLOWING FORCEPS DELIVERY.—Dr. A. M. Leonard sends us the history of a case of hydrocephalus in a child aged four months. The circumference of the head at its largest part, measured horizontally, was thirty-nine inches. Over each parietal bone was an ulcer. At birth the child appeared perfectly normal, excepting a cut that nearly severed the ear, and bruises upon the mastoid processes and frontal bone, caused probably by locking the forceps (the case was not in Dr. Leonard's practice). Soon after birth a swelling was noticed at the point of injury to the os frontis, which continued to enlarge until death. It was a head presentation, with forehead coming under the arch of the pubis (fourth position).

THE POISONOUS PROPERTIES OF ANILINE DYES is the title of a work recently published by M. Grondhomme, superintendent of one of the largest laboratories in France. These dyes are now extensively used in the manufacture of socks, stockings, and other fabrics worn in contact with the cutaneous surface. Such dyes are especially used in the fancy fabrics sold for the wear of children from four to ten years of age, and in the blues and various red shades of gentlemen's socks. M. Grondhomme declares that the cases of poisoning recorded by medical men as due to these dyes are really traceable to the arsenious acid used in the preparation of the colors, not to the coloring matter itself. The fumes of a few of the dyes arising from the manipulation of petroleum produce difficulty of respiration when persistently inhaled. This is true of naphtholin, for example. Others are perfectly neutral and inert in their effects, and possess no toxic potency whatever, and to this category belongs aniline and its immediate relatives. M. Grondhomme pleads the cause of aniline dyes very strongly. There is no doubt, however, that some of them are poisonous, and quite actively so when taken internally.

ANTISEPTIC COLOGNE.—The following is commended as a preparation combining antiseptic properties with a perfume:

Eau de Cologne	8 fl. oz.
Chloral hydrate	2 drachms.
Quinine (alkaloid)	10 grains.
Carbolic acid (pure)	30 "
Oil of lavender	20 drops.

This may be used on the handkerchief, the doctor holding it gently to the mouth while in the sick room. Warranted to keep out bacillus tuberculosis; also b. termo, b. elephantiasis A., and b. gonococci.

DISINFECTION BY HOT AIR.—Koch and Wolfhügel, in experiments made to determine the disinfecting power of hot air, were led to the following conclusions: 1. Bacteria are destroyed by being exposed to a temperature of a little over 100° C. for an hour and a half. 2. Spores of brewer's mould require for their destruction an exposure for the same time at 110°–115° C. 3. Bacilli are killed only by three hours' exposure at 140° C. 4. The heat of hot air penetrates articles so slowly that in three or four hours' heating at 140° C. of small objects, such as a bundle of clothes, etc., disinfection was not secured. 5. Five hours' heating at 140° C., necessary to certain disinfection, does serious injury to most articles.

WHOOPING-COUGH.—Dr. Aymerick, in the *Medical Press and Circular*, recommends, in the treatment of whooping-cough, the employment of phenic acid with bromide of potassium; bromide of potassium, one drachm; phenic acid, three to four grains; syrup lemons, q. s.; vehicle, six ounces. A large or a small spoonful, according to the age of the patient, every two hours. He has never seen any accident to follow the antiseptic method.

ATROPIA FOR EAR-ACHE.—The most effectual treatment, and the one which has stood the test of years, says Dr. A. D. Williams in the *Chemists' and Druggists' Bulletin*, is the local application of a solution of the sulphate of atropia. Not a single case but has yielded at once. The solution is to be simply dropped into the painful ear and allowed to remain there from ten to fifteen minutes. Then it is made to run out by turning the head over, then being wiped with a dry rag. The solution may be warmed to prevent shock. From three to five drops should be used at a time. The strength of the solution must vary according to the age of the child. Under three years, one grain to the ounce, and over ten years, four grains to the ounce of water. In grown persons almost any strength may be used. All ages will bear a stronger solution in the ear than in the eye. The application should be repeated as often as may be necessary. Usually a few applications will stop the pain. In acute suppurative inflammation of the middle ear, and acute inflammation of the external meatus, atropia will only slightly palliate the suffering, but in the recurring nocturnal ear-aches of children it is practically a specific.

THE DAISY, called by botanists *bellis*, is dragged from its high æsthetic heights by the eclectics and

made into tinctures and infusions. Its properties resemble those of arnica and hamamelis. It is a useful application for bruises, sprains, etc., and it is a reputed antisuppurative.

The red clover (*trifolium prætense*) is also much commended as a remedy in spasmodic coughs (pertussis, etc.). Teaspoonful doses of the infusion are given.

CHIARI, THE PATHOLOGIST, has just been made Professor at Prague and will leave us in September. He is a man thirty years old, who has already made over 8,000 post-mortem examinations. A better teacher of pathology one could not wish for, while to see him make a post-mortem is a wonder. At a recent supper given in his honor one of the speakers said he could not wish for greater happiness than that of being post-mortemed—if I may use the expression—by his friend Chiari.—*Vienna Correspondent of Maryland Medical Journal.*

A FAVORITE SEAT FOR THE BACILLUS OF TUBERCLE, according to Chiari, to lie dormant in obscure cases, is the suprarenal capsule; from this point frequently the acute disease starts, leaving no organ in the body untouched.

THE VENEREAL WARDS OF THE VIENNA HOSPITAL.—It makes a strange impression on an American to go for the first time through the syphilis wards with the professor. Arranged in long rows on their backs in bed, with nothing covering them from their knees to their navels, lie the men ready for examination. Standing around, with various implements and dressings, are five or six active women awaiting orders from their lord and master, the professor. The men are not allowed to touch themselves, so with their hands under their heads they lie there with anxious faces awaiting the next development in the treatment. Truly, it is a comical sight this mixture of the sexes under the circumstances.—*Correspondent Maryland Medical Journal.*

THE AMERICAN PHARMACEUTICAL ASSOCIATION.—The thirtieth annual meeting of the American Pharmaceutical Association began its sessions at Niagara Falls on Tuesday, September 12, 1882, in the parlors of the Cataract House. The attendance was large, probably exceeding four hundred on the first day, and five hundred on later days. Various papers having a pharmaceutical interest were read.

THE MEDICAL SCHOOLS OF NEW YORK begin their regular terms next week. Already a large number of students are in the city, and there is every promise of full classes.

AN EPIDEMIC OF DYSENTERY is reported to exist in Malmö, Scotland. Five hundred cases are reported weekly, of which one-half died. The disease is spreading.

PAUL VOGT has been called to the Chair of Surgery at Greifswold, in place of the late Hueter.

CHANGES IN THE LOUISVILLE MEDICAL SCHOOLS.—In the University of Louisville, Prof. L. P. Yandell has been transferred to the Chair of Medicine, and Prof. Parvin to that of Obstetrics. Prof. Holland has been given the Chair of Pathology, Clinical Medicine, and Nervous Diseases.—The Jefferson School of Medicine, a new summer-course institution, seems likely to cease its not obtrusively useful existence.—Dr. C. W. Kelly has been made Professor of Anatomy and Clinical Medicine in the Kentucky School of Medicine, Dr. Holloway has been chosen to the Chair of Surgery, Dr. T. Anderson to the Chair of Medicine. There seems to be an admirable versatility on the part of our Louisville brethren, which enables each one to teach all things equally well.

PROFESSOR ERB goes to Heidelberg as successor of Friedreich.

CULTIVATING THE BACILLUS OF SYPHILIS.—M. Martineau reports to the Academie de Medicine that he has cultivated the bacillus of syphilitic chancre after the method of Pasteur and has inoculated a pig with the cultivated germs. There resulted a sore and swelled glands with bacilli temporarily in the blood. The animal recovered in two months. Fluid from its sore did not affect two other pigs inoculated.

THE GERMAN SCIENTIFIC ASSOCIATION met at Eisenach, September 18th to 23d. The antiseptic system was among the subjects discussed.

PROFESSOR E. S. WOOD, M.D., of Harvard College, and Professor B. F. Davenport, M.D., of the Massachusetts College of Pharmacy, have been appointed the analysts under the act relating to the adulteration of food and drugs in Massachusetts.

THE YELLOW FEVER EPIDEMIC.—The yellow fever is decreasing in Brownsville, Texas. It has, however, been creeping up along the Rio Grande, and the sanitary cordon has been changed from Corpus Christi and Laredo to Arroyo and Laredo. The cases and deaths in Brownsville for the week ending September 23d, as reported by the Surgeon-General of the Marine Hospital Service, are as follows:

	Cases.	*Deaths.*		*Cases.*	*Deaths.*
September 17	27	1	September 21	8	1
September 18	19	4	September 22	4	1
September 19	4	1	September 23	9	0
September 20	18	1		—	—
Total				99	9

Previously reported, 1,771 cases, 94 deaths. Grand total, 1,870 cases, 103 deaths.

Pensacola continues to be in a pitiable condition. The record there is as follows:

	Cases.	*Deaths.*		*Cases.*	*Deaths.*
September 13	19	3	September 20	41	6
September 14	11	3	September 21	60	2
September 15	19	2	September 22	43	2
September 16	19	1	September 23	36	5
September 17	8	None.	September 24	39	4
September 18	27	1	September 25	55	2
September 19	26	4		—	—
Total				478	35
Previously reported				114	19
				—	—
Grand total				587	54

PIDOUX, the eminent collaborator of the late Trousseau, died at Paris, September 4th. He took his first degree in 1835, and had been a member of the Academy of Medicine since 1864. He was also a member of the Legion of Honor.

HYPEREMESIS AS A CAUSE FOR PRODUCING ABORTION.—Professor C. Braun, of Vienna, thinks that hyperemesis is not a proper cause for the production of artificial abortion. He has never seen a case of death from vomiting, and believes that it can be kept within safe limits by proper means. In a case reported he afforded relief by the application to the cervix uteri of a ten per cent. solution of nitrate of silver. In France, where the operation is frequently done for this purpose, the vomiting is relieved by the abortion in only about forty per cent. of the cases, while ten per cent. of the cases are fatal.

Original Lectures.

ON THE TREATMENT OF DIPHTHERIA.[1]

By PROFESSOR DUGARDIN BEAUMETZ,

PARIS, FRANCE.

Part I.

Gentlemen:—Diphtheria has made frightful ravages in our population these late years. Cast your eye over the careful statistics of our colleague, Ernest Besnier, and you will observe that the mortality from diphtheria these past ten years has exceeded by considerable the mortality from typhoid fever and that of the three eruptive fevers—small-pox, measles, and scarlet fever—combined. Thus the total number of deaths from diphtheria were 16,290; those from typhoid fever, 10,304; while those from the eruptive fevers mentioned amounted to 11,180. Diphtheria, then, is a disease which you will often be called to treat, and which, with all your therapeutic resources, you will continually fail to treat successfully. But if there is really no medication which is curative for these affections, there are certain modes of treatment which are dangerous and which you must avoid. Moreover (and this is an important point), the varying constitution of the malady profoundly modifies the results of treatment, and explains why a host of remedies have been prescribed for diphtheria, which have, in certain epidemics, given good results, and which have signally failed in others.

In fact, the disease presents different types of malignity. Some epidemics, like that which prevails at the present time in Paris, are rebellious to almost every kind of treatment. We have seen in our hospitals this very year a mortality of sixty-six per cent.; *i.e.*, out of 1,255 cases there were 829 deaths. In other localities the mortality has been almost nil. How, then, can you draw serious and satisfactory conclusions from statistics applied to the therapeutics of a disease whose morbidity is so variable? We see almost every day physicians practising in localities more or less distant from Paris, who affirm with the utmost good faith that this or that medication has enabled them to save all their diphtheritic patients; we try the remedy in our hospitals and meet with complete failure. We have then to make account of differences in type and malignity, in accordance with seasons, climate, location, and other circumstances, and have need of caution in the application of statistics to the results of therapeutics.

The subject of the present lecture is not so much diphtheria in general, which is a constitutional disease, contagious and epidemic, with marked local manifestations, as that particular form or species known as diphtheritic sore throat, or membranous angina; and if I have placed the treatment of this disease in the therapeutics of affections of the larynx and pharynx, it is because this is a convenient place to speak of a malady which logical exactness would consign to the department of general diseases.

The German school has in these late years disturbed somewhat those precise notions, so generally held by us as a nation, of the unity of diphtheria. You well know that we are indebted to Bretonneau for the general view that all the pseudo-membranous affections, croup, membranous angina, cutaneous diphtheria, etc., have a common origin, and are expressions of a general disease which he called diphtheria. According to the German school, on the contrary, every false membrane, whatever may be its origin, is a croupal affection, and they have established two sorts of pseudo-membranous affections—the one without infection and local, the other depending on a general poisoning of the organism. They have even dignified with the name of croupal the false membrane which follows the application of certain caustics, as nitrate of silver, to the mucous membrane, and they apply the same name to the false membrane which diphtheria produces, basing their description, not on the general symptoms, but on the pathological anatomy of pseudo membranes. From a histological standpoint, it is very difficult to distinguish between these pseudo-membranous exudations due to caustics and those which characterize diphtheria.

One reason for the want of prevalence of clear ideas on this subject is the existence of mild forms of diphtheria, the local and benign membranous anginas. The diphtheritic intoxication presents different degrees of intensity. In certain cases the general toxic symptoms predominate, and the false membrane has only a secondary part. In others the general symptoms are little marked, but the local manifestations are well defined. Hence the morbid unity has been lost sight of, and the different phases of the same disease have been classed as different affections. The convincing evidence of this unity is the epidemicity and contagiousness of all these diphtheritic affections, and just as we see manifested in epidemics of the eruptive fevers forms varying widely from the type as well as typical forms, so you will meet in the same house and in the same family all the forms of diphtheria, from the most benign to the most malignant. To-day, then, the idea of Bretonneau, supported by Trousseau, seems to have triumphed over all its adversaries, and even in England, where the doctrine of duality had been for some time maintained, the opinion is becoming prevalent (as expressed by West and Jenner) that angina membranacea and diphtheria have a common origin.

Excuse me for having so long dwelt on this particular point, which belongs rather to clinical medicine than to clinical therapeutics, but it has an important bearing on the discussion on which I am now to enter.

If it is to-day demonstrated that membranous angina is truly the local manifestation of a general affection, you readily perceive that all the topical applications at your disposal play but a secondary part in the treatment, and that to cure the diphtheritic affection you must not merely direct your treatment to the pharynx, but above all to the general malady of which the local disease is the expression.

You must recognize the fact that we are ignorant of the nature of diphtheria. We have advanced no farther than certain hypotheses. The most probable is surely that which considers diphtheria as a disease produced by microbes, and the ideas of Pasteur have given a progressive impetus to all these questions of contagious diseases, in calling attention not only to the influence of inferior organisms on the production of morbid phenomena, but also in showing us how we may in certain cases, by preventive inoculations, obtain protection from such

[1] Delivered in the Hôpital St. Antoine. Translated (by permission) from advanced sheets for The Medical Record by E. P. Hurd, M.D., Newburyport, Mass.

affections. But to the present time we are ignorant of the mitigated "vaccine" which shall give us immunity from this terrible malady.

Being unable to reach the supposed parasitic causes of diphtheria, we are restricted to the treatment of the manifestations, and it is this which at at once explains our therapeutic impotence in such cases. Nevertheless, it must not be supposed that the labors of Pasteur have not in a certain measure modified the treatment, general and prophylactic, of diphtheria, and you will see that antiseptics, and in particular parasiticides, have here a considerable part. We shall have here to study, from the standpoint of membranous angina, three kinds of treatment: the local treatment, the general treatment, and the prophylactic treatment.

In order well to understand the conditions which the local treatment of diphtheritic angina should fulfil, you must know how the local manifestations of this constitutional affection develop, and I cannot do better than refer you to the researches of Laboulbène, Letzerich, Klebs, Tommais, Hueter, Homolle, Duchamp, Eberth, Cohn, Zahn, Talamon, etc., and to the more recent researches still of Leloir, of Thomas, and of Cornil. Constituted by fibrinous deposits, enclosing in their meshes leucocytes and epithelial fragments, the false membranes are of variable thickness and consistence. Below them the epidermis is destroyed and the derm presents alterations more or less profound; often it is affected with sphacelus, and then is observed that diphtheria of gangrenous form which you will see described by all the authors. In other cases there is a marked hemorrhagic tendency, and it is only necessary to brush away the false membrane to determine an oozing of blood, more or less active, from the derm thus denuded.

These false membranes sometimes remain stationary and are reproduced very slowly. Sometimes, on the contrary, they invade the surrounding tissues very rapidly and are reproduced with extreme facility. But there is a fact of the utmost importance which it would be well for you to remember—these false membranes have a tendency to invade and to occupy all parts of the mucous membrane and of the skin that are deprived of their epithelium.

But before discussing the conditions which a local treatment of diphtheria ought to fulfil, we should first prove the utility of that treatment. Since it is a recognized fact that the false membrane is but the local manifestation of diphtheria, one may ask himself, Why direct therapeutic endeavors to this manifestation, since we cannot prevent its reproduction?

To reply to this question we must venture upon one of the points the most mooted in the study of diphtheria; I refer to the possible inoculation of diphtheria by the false membranes, or of what has been described under the name of auto-infection. It has, in fact, been maintained that the contagious principle of diphtheria resides in the false membrane, and that it is sufficient to place portions of this product on certain parts of the skin or mucous membrane to see diphtheria develop, when the conditions are favorable. It has even been maintained that the presence of these false membranes is a constant source of infection in the same individual.

Although there is not unanimous agreement on all these questions, it none the less remains a fact—as a result of such views as are above stated—that there is everywhere a real and dominant interest in causing the false membranes to disappear by a local treatment. Let us now examine what conditions this local treatment ought to fulfil: it should dissolve the false membranes on the one hand, and oppose, as far as possible, their reproduction on the other.

The number of means devised to attain this object is considerable. For the sake of order I will consider them under four distinct groups. The first act mechanically, the second attack the false membrane and aim at its solution, the third modify, more or less deeply, the structure of the derm (caustics), the fourth have an action quite different, being medicaments which, administered internally, are eliminated on the surface of the mucous membrane. Let us examine each of these groups.

The mechanical measures are the most numerous. They consist of brushes, swabs, and pencils, with which attempts are made to detach the false membranes. My own preference is for little bits of sponge attached firmly to a whalebone. The elasticity of the latter prevents serious injury to the pharynx, and the sponge is in no danger of leaving hairs or portions of lint in the throat to provoke cough, as are the swabs and camel's-hair pencils in common use. Irrigations with cold water and the topical use of ice are of great use in the treatment of diphtheria. The spray or jet of water is far superior to the brush as a means of detaching the false membrane. Its action is as thorough without being as harsh. Whenever the patient will allow it, you may with a syringe throw into the back of the throat a jet of water with sufficient force to gradually separate the false membranes. In the absence of a syringe you can make use of a seltzer siphon bottle, like that which the soda-water dealers furnish, and you will have, by reason of the pressure of the carbonic acid gas, a powerful jet which will thoroughly wash out the fauces and pharynx. Blache has even proposed, in order to make these irrigations, a tongue depressor, furnished near its median part with a canula, to which he adapted the extremity of an irrigator or of a syringe, which enables him, in the case of little children, to open the mouth, depress the tongue, and irrigate the throat.

Ice is one of the best of the mechanical means for clearing the throat of false membranes, and without admitting with Grand-Boulogne, Baudon, Lebert, and especially with Bleynie, that diphtheria may with certainty be cured by this means, I am nevertheless convinced that it renders real service. Ice calms the irritation of the throat, diminishes the congestion of the mucous membrane, and clears the parts of false membranes. Fortunately, ice can always be obtained in our large cities, and the most refractory children accept very readily the little bits of ice which you give them. By the side of injections of water we may place pulverizations, made with steam atomizers and spray-producers. Prosser James, Oertel, and Mackenzie have demonstrated the benefit which can be derived from the vapor of water in diphtheria. The steam atomizer is of undoubted utility in this disease. It enables us to keep our patients in an atmosphere of moisture, which favors the separation of false membranes, and the atomized medicine (inhaled with the air of respiration) can be conveyed some distance into the upper air-passages.

Next to the steam atomizer, I am partial to the apparatus known as the spray-producer. Those in common use have a single bulb, with nickel-plated tube of sufficient length to permit of being applied directly to the faucial region. These atomizers

throw a spray which may be medicated with any antiseptic or solvent, and the atomizing canula can be made to convey the pulverized liquid into any part of the throat or nares.

The solvents of false membranes have another end—that of dissolving these products as fast as they are produced. The experiments of Bricheteau and Lebaigne show that by strong acids one hardens rather than dissolves these false membranes, while a solvent action is obtained by the less energetic acids, and particularly lactic acid. The best solvent action (singularly enough) is obtained from lime-water. Kuchenmeister and Bierner, of Berne, have proved this.[1]

Other substances act by digesting the false membranes. Hale White (*vide Lancet*, 1881) has employed, in grave cases of diphtheria of the throat and larynx, pulverizations of a combination of glycerine and pepsin, and Bouchut has recommended local applications of papaïne as a useful solvent of diphtheritic exudations[2] (*Bulletin de Ther.*, T. ci., p. 128).

It is customary to employ the mechanical measures above mentioned and the solvents conjointly. You make with a sponge probang local applications of lime-water or injections into the pharynx of different solutions. Solutions of citric acid, lactic acid, the juice of limes, etc., have obtained a certain reputation as solvents of false membranes.

The modifiers of the mucous membrane are much more numerous. One class has for result to cauterize the mucous; another to modify the secretion; another still is addressed to the parasitic element of the disease. Commence, then, with the caustics. Energetic cauterizations of the throat in diphtheria have long had a great repute, and even to-day we hear practitioners affirm that by this means they have arrested on the spot the development of diphtheria. The most violent acids have been employed locally; chlorhydric, nitric, and even inhalations of fluorhydric, concentrated solutions of caustic alkalies, and nitrate of silver, in crayons or in solution. It is the custom of a great many physicians to practice these cauterizations with the lunar caustic as soon as they see the false membranes appear in the isthmus of the fauces. Gentlemen, I cannot too strongly protest against this treatment, which is not only useless but painful and dangerous—useless, because caustics do not in any manner dissolve the false membranes or prevent their reproduction; painful, as any one can testify who has made these caustic applications. After you have done it *once* you can seldom get the consent of your young patient to allow you to repeat the cauterization, or even examine the throat, and you are sure to provoke such a degree of inflammation of the mucous membrane of the throat that your patients (and especially children) take nourishment with great difficulty. Dangerous, for this reason especially, that these cauterizations deprive the mucous membrane of its protective epithelium, and thus present a wider extent of surface to be invaded by the false membranes.

I would advise, then, that you should avoid cauterizations altogether, for they place your patients in most unfavorable conditions, in that they prevent the due administration of food and hinder any further treatment. Moreover, they have no effect whatever on the constitutional affection, and they certainly have this deplorable result, that they favor the extension of the diphtheritic exudation.

Let us examine now the modifiers of the secretion of the mucous membranes. Among those which have great repute we must assign the first place to perchloride of iron[1] and to tannin.

Perchloride of iron has given good results. In solutions more or less dilute, it modifies the surface of the mucous membrane, acts as an antiseptic, and opposes the hemorrhagic tendencies which we observe in certain cases; I am of opinion, then, that it is well to continue the use of this medicinal agent in very dilute solutions. If you use it in too concentrated a form, you must expect all the inconveniences and dangers which attend caustic applications.

Great expectations have been based on the use of tannin. It was maintained some twenty years ago that insufflations of this medicament would cure not only diphtheria, but also croup. Dr. Loiseau, of Montmartre, gave to this treatment a certain notoriety. Loiseau had been the subject of a curious mistake, which resulted from the artificial production of false membranes by the tannin, which had been conveyed into the pharynx by a powder-blower. Tannin coagulates the albumen of mucus, and after the application of this medicament to the throat by insufflation, the patient frequently coughed up pseudo-membranous flakes which were the result of the coagulating action of which I have spoken. This treatment is at the present day abandoned. The same may virtually be said of the treatment by iodine and bromine. The second of these remedies has considerable testimony in its favor. Peyraud, of Libourne, was one of the first to call attention to the caustic and alterative action of local applications of bromide of potassium;—the pseudo-membranous patches being literally dusted over with the bromide in fine powder, and afterward sprayed or gargled with a tolerably strong solution of the same medicament. Although he claimed astonishing results (twenty-seven out of twenty-nine

[1] Kuchenmeister was the first to remark the solvent action of lime-water in diphtheritic exudations, and, in 1864, Bierner, of Berne, verified the observation. The following mixture, containing saccharate of lime, is much used as a gargle. It may also be taken internally in dessert-spoonful doses, every two hours:

℞. Lime (or lemon) juice..... ℥ x.
Chloride of sodium ..... ʒ ijss.
Sulphate of sodium..... ʒ ijss.
Honey..... ℥ ss.
Saccharate of lime..... ʒ j.
Acid carbolic (or phenate of soda) ..... gtt. xx.
M.

The free use of lime-juice, internally and locally, has been recommended by Revilloud, Chatard, and Soulé.

[2] Bouchet's experiments show that papaïne will dissolve false membranes. The application must be repeated often (every second hour). The diphtheritic membrane slowly thins out, breaks up, and disappears under the treatment, three or four days generally sufficing. Thirty-two cases were treated by papaïne. Of these there were only four deaths.

[1] Vaunted especially by Aubrun in 1860, and by his son in 1867, the perchloride of iron has been considered a powerful antiseptic in diphtheria. This is Aubrun's way of giving it: Four to seven grammes [1 to 2 drams] are administered daily, given in fractional doses of twenty drops in a little sweetened water; every few minutes the patient takes a swallow of this solution till the quantity prepared is all taken. Immediately afterward a little pure milk is given. Wine and a tonic regimen is prescribed.

Isnard and Courty have employed the same preparation with success. Heslop and Houghton advise the following solution:

℞. Tinct. fer. perchloride. ..... ʒ iij.
Acid hydrochloric dil. ..... ʒ ij.
Aquæ..... ℥ viij.
M. Signa: Two tablespoonfuls every three hours.

Clar, of Germany, combines the perchloride of iron with glycerine, as in the following preparation:

℞. Glycerine..... ℥ ij.
Liquor ferri perchloride..... gtt. xx.
M. Signa: A teaspoonful every half hour.

[In this country we are much in the habit of combining the tincture of perchloride of iron with glycerine and chlorate of potash, as in the following formula for a child five years old.

℞. Tinct. fer. perchloride..... ʒ jss.
Chlorate potas..... ʒ j.
Glycerine ..... ℥ i.
Aquæ flor. aurantii..... ℥ i.
M. Signa: A teaspoonful every half hour or hour.

There is much testimony in favor of chlorate of potas. as an antiseptic agent of great power.—*Translator.*]

cases), other experimenters in other epidemics have not met with the same success. Cadet de Gassicourt, who experimented with this mode of treatment in the Hôpital des Enfants Malades, lost all of his patients, eight in number; the epidemic was very fatal that season.

Along with these substances we must reckon alum and borax, which act as topical alteratives, but which are to-day abandoned.

It is not so with the parasiticides, which are held in high favor. Influenced by the important discoveries of Pasteur, physicians have maintained that the parasitic element is the one most imperatively demanding attention. Undergoing development in the false membrane, and thus at first of local origin, the parasitic germ penetrates forthwith into the economy, where it oppresses and paralyzes all the vital functions. Let us then, say they, kill the parasite on the spot before it gets into the blood and infects the entire organism. Hence local parasiticide gargles, pulverizations, injections, have been recommended; solutions of carbolic acid, chloral, creosote, coal-tar, thymic acid, carbolated camphor, etc. I have myself used resorcine. All these means modify, sometimes happily, the pharyngeal mucous membrane, but one cannot base upon this treatment any positive medication.[1]

These solutions are sometimes applied directly by means of a brush or swab, sometimes they are atomized, the steam apparatus or spray-producer being used. The latter method is the best, and although I do not believe in the certain efficacy of these local applications, I yet see the great advantage of making our diphtheritic patients (and young children especially) live in an antiseptic atmosphere. By this means you can not only medicate the fauces and pharynx thoroughly, but you can, to a certain extent, prevent contagion. The reservations which I have made *à propos* of antiseptic solutions, I also make *à propos* of benzoate of soda, which has been vaunted of late, and especially in Germany. I have often employed the benzoate of soda in my service in the children's hospital, and I have not obtained better results than by other methods.[2]

I have finished what I was going to say about the local modifiers of the faucial mucous membrane, and I now take up the fourth group of medicaments, those which modify favorably the mucous membrane by their elective elimination on its surface.

(To be continued.)

[1] The phenated camphor, employed with success by Soulez and Pératé, is applied locally to the diphtheritic exudations. It is prepared by dissolving twenty-five grammes of powdered camphor in a solution of phenic acid (nine grammes in nine grammes of alcohol). Lemoine advocates continuous injection of coal-tar, which acts mechanically as disinfectant and parasiticide (Th. de Paris, p. 369, August 4, 1879).

[2] Graham Brown has studied the action of antiseptic liquids on the diphtheritic virus, and he concludes from his experiments, made with hares, that quinine, salicylate of soda, and benzoate of soda, when they are mingled with the diphtheritic virus, destroy the virulent properties of the latter. The most active of these substances is the benzoate of soda; even in hypodermic injections the benzoate of soda retards the development of the diphtheritic poison. Letzerich, concluding from experiments of his own, has employed the benzoate of soda in the case of infants affected with diphtheritic laryngitis, losing but one out of twenty-seven. To a child above a year old he prescribes the following potion:

℞. Benzoate of soda..... gr. 0.75
Distilled water.....
Peppermint water.....āā ʒj. and ʒ ijss.
Syrup aurantii ..... ʒ ijss.

M.—Dose, half a teaspoonful every hour.

The dose of benzoate of soda increases in proportion to the age: From one to three years old, from ʒ jss. to ʒ ij. daily. From three to seven years old, from ʒ ij. to ʒ iij. After seven years, from ʒ ijss. to ʒ ss. Adults may take from ʒ ss to ʒ vi. daily. No untoward results have ever followed its use. The diphtheritic patches in the throat are treated by insufflations of the benzoate.

Original Communications.

THE PRODROMIC STAGES OF DIFFUSED KIDNEY AFFECTIONS.

A CONTRIBUTION TO THE PATHOLOGY OF THE SAME, WITH SOME REMARKS ON DIAGNOSIS AND TREATMENT.

BY HUGO ENGEL, A.M., M.D.,
PHILADELPHIA, PA.
FELLOW OF THE AMERICAN ACADEMY OF MEDICINE, ETC.

WE have for a long time been familiar with the fact, that under certain circumstances a transient albuminuria may happen in a person of normal physical health, and the idea has gained ground that such an albuminuria may be a physiological occurrence. But a more thorough study of this subject and a large number of observations have convinced me that the following conclusions are correct:

First.—In a perfectly healthy individual the presence of albumen in the urine is one of the rarest occurrences and only happens under conditions which by themselves have an influence on the temporary health of the individual, *i.e.*, at the time of such an occurrence the person whose urine contains albumen is not in perfect health.

Second.—If without any other symptom or sign denoting the presence of any disease, albumen appears in the urine of an apparently healthy person *occasionally*, and not very *rarely* only, then this fact alone indicates further mischief, and predicts that such an individual, sooner or later, will fall a victim to a diffused kidney-disease.

Third.—A person in whose family diffused kidney-affections seem to be hereditary, and who is apparently in perfect health, but whose urine does occasionally contain, no matter how little, albumen, will surely be affected by the same disease if medical skill is not able to prevent it.

Fourth.—If a person, apparently in perfect health, and whose urine occasionally gives evidence of containing albumen, suffers from dyspeptic symptoms at times, and if, on examination, the second sound of the heart, especially over the seat of the aortic valve, is found accentuated, louder than normal, such person is already in the first or prodromic stage of a diffused kidney-lesion, the character of which depends upon many different conditions existing in the individual itself.

In the following I will endeavor to prove these hypotheses, and to contribute some not unimportant facts to the pathology of these dangerous morbid processes. My observations were continued for about twelve years. At that time, *i.e.*, twelve years ago, a patient, F. J. M——, aged twenty-three years, who had been suffering from an attack of indigestion, due to too great an indulgence in champagne at a marriage feast, but who usually took very good care of his health, asked me amongst other questions, how it came that his urine so often assumed a different color? I explained to him how the different substances we eat and drink, the amount of fluid imbibed, and the state of the perspiration, had all their influence on the composition, and, therefore, on the appearance of the urine. He insisted, however, that in him it all seemed to depend upon the quantity of a meal, rather than upon quality. Avoiding a useless discussion, I asked him to show me, occasionally, specimens of his urine. He should

always micturate before a dinner and then bring me some of the urine passed five or six hours after such meal. The young man was often invited to dinners, when he used to more than satisfy his appetite, while when he took his meals at a restaurant, he contented himself with the plainest dishes. He gave as cause, that it was the company, the interesting table-talk, which made him eat more when invited, besides he wished to counterbalance his frequent rich dinners by plain meals at other times. I did not take the trouble of a thorough chemical analysis, for which I had neither the time, the necessary preparations, nor the stimulating desire, intending rather to satisfy the curiosity of the patient, than to make scientific or clinical observations. I mention this in such length to show what small causes may often lead to important results.

What, then, was my astonishment, when I found that the urine of this young man always contained albumen and a surplus of urea whenever he had indulged in a hearty meal, especially after having eaten much meat and rich dishes composed of the same, as croquettes, etc., while, at other times, the urine was free from albumen. I now questioned him further, and heard that his father and an uncle had died of Bright's disease, and that he had been told that his grandfather and several other members of his family had suffered from the same malady.

This fact set me thinking, and thence dated my observations. There never were, at the time, any tube-casts in the urine of this patient, of whom I later shall speak again.

Being myself then in the best possible physical health, I next made experiments on myself. I purposely ate sometimes very little for breakfast, to be able to eat the more at dinner, but, notwithstanding, I succeeded often in eating a meal, which, mainly consisting of meat or other rich albuminous dishes, would have been enough for two hearty sailors, only twice in the course of three months was I able to detect a small amount of albumen in my urine, and both times I had not felt quite well after the meal, and had concluded from the long-continued pressure and the feeling of weight I experienced in the epigastric region, as well as from some belching, want of appetite for a day, and a slightly coated tongue, that the heavy dinner had each time disturbed my digestion.

I then endeavored to persuade some of my friends and some patients, who were suffering from minor, mere external ailments, which could not possibly have had any influence on the composition of the urine, to give themselves up to these experiments. The result of the latter, which were made in the years 1871–73 inclusive, was as follows:

Wm. M. J——, aged twenty-six years, healthy, parents the same. Number of observations, fourteen; time, four months. Results: only twice found albumen; had in both cases eaten too much, and complained of indigestion. The last time the albumen was present his appetite left him for several days and he gave up the experiments in disgust.

Chas. K——, aged twenty-two years, healthy. Father died of pneumonia; mother living and in good health. Number of observations, five; time, six weeks. Results: none.

Fr. B——, aged thirty-three, healthy, parents the same. Number of observations, nine; time, two months. Result: albumen once only; here also the last time, and the symptoms of indigestion caused by the meat induced B—— also to drop the experiments.

J. F. C——, aged twenty-four, healthy, parents the same. Number of observations, sixty-three; time, five months. Result; albumen found twice. C—— was anyhow a heavy eater, but after the first time albumen had been met with, he could tell me of its presence beforehand the second time, from the same dyspeptic symptoms he had experienced in the first successful trial.

A. S——, aged twenty-nine years, healthy, but parents dead. Father died of cancer, mother of typhoid fever. Number of observations, eleven; time, two months. Result: none.

Besides, I requested twenty-eight other men to send me some of the urine they would pass about six hours after what they might consider an unusually heavy meal, consisting of beef, eggs, and oysters mainly; fourteen did so, but I never detected any albumen.

Though perhaps not conclusive, these observations prove that it is rather difficult to cause in a healthy person, even after a heavy, abundantly albuminous meal, the presence of albumen in the urine, that such will happen very rarely only, and that in case it does occur, the person is not in a *perfect* state of health at the time; the digestion seems to have to be interfered with to produce, even under the circumstances mentioned, the appearance of albumen in the urine.

But now come three cases of a different character. I had frequently noted before, that in persons who had been drinking large quantities of undiluted alcohol, the urine would contain albumen for some time, but considered these cases as not properly belonging to the present category; the influence of alcohol in this respect being well known. After beer I had, notwithstanding numerous experiments, never been able to find albumen in the urine, under ordinary circumstances.

P. McL——, aged twenty-six, a young Irishman of healthy descent, and himself a splendid specimen of ruddy health, was attended by me April, 1873, for subacute bronchitis. On examining the urine I found albumen in it. His urine I analyzed daily, and during the six weeks he was under my care he had albumen in his urine every Sunday morning. He never drank any alcoholic liquor during the week, but every Saturday evening he treated himself to a rich supper and imbibed freely in beer, though not enough to cause intoxication, but the next morning he did not feel, for an hour or so, quite so well as usually, and the urine then passed contained albumen, which gradually disappeared again, as I convinced myself once, before evening the same day. I persuaded him one time to omit his Saturday evening libation; the next day there was no albumen in the urine, but as he missed his beer too much and made up for what he had lost the same evening, the urine on Monday told me by the presence of albumen what he had done the night before.

W. C——, aged twenty-four, a young negro, of a very decent and healthy colored family, came under my observation March 4, 1873. He was the picture of health, and only requested the removal of a small tumor from his right ear. The appendix looked to me first like a keloid, but the successful result of the operation, the non-recurrence of the growth, and its microscopical appearance, proved it to be a simple hypertrophy. C—— told me that he had always enjoyed very good health, complaining only occasionally of back-ache, which he dated from a cold taken a year before. The pain was of the character of lumbago, and yielded to electricity, the faradic

current being applied to the small of the back in moderate strength. When I examined his urine I found albumen in it, but no tube-casts. Repeated examinations convinced me that whenever he had a feeling of weight in the stomach after a meal, this sensation was sure to be followed by albumen in the urine. During the three weeks I then treated him, a specimen of his urine, passed five to six hours after dinner, was daily analyzed, and found, from two to three times a week, to contain albumen.

Chr. F——, aged nineteen, shot, on July 4, 1873, with a revolver, a piece of the small finger of the left hand off. He came to me for surgical treatment. To my surprise I found albumen in his urine. F—— was very small in stature, being only a little over five feet in height, but well built and enjoying very good health, as his parents did also. Whenever he would get excited and angry, which happened rather frequently—according to the saying, that little men get their temper easily up, just as is the case with small dogs, those barking the most that can bite the least—he would lose his appetite for the next meal, and his urine contain albumen. During my treatment of him at that time—nearly a month—I also examined daily his urine, and found it to contain every few days a small quantity of albumen, but no tube-casts.

I will now mention the case of a cousin of F. J. M——, viz., of Louis M——, aged thirty-one. Louis came under my charge a year later than F. J. M——. He also was a strong and healthy man. His father, too, had died of morbus Brightii, and Louis showed the same tendency to albumen in his urine as his cousin, but still more strongly developed. He needed only to eat very rapidly and the urine would contain albumen. He suffered besides, most of the time, from mild dyspeptic symptoms.

I had the opportunity of watching the further progress of the cases of F. J. M—— and L. M——, Chr. F——, P. McL——, and W. C——. With some of them I should have lost this chance, perhaps, if I had not offered them my professional services free of charge, on the condition that they would always appear with a specimen of their urine when wanted. They are all now in about the same condition as another case, N. S——, was when he, three years ago, came first to me, and who was destined to die, before his expected time, a violent death.

N. S—— was a young painter, and, when I saw him first, in February, 1879, then twenty-six years of age. His father had died of dropsy, caused, if I may judge from the description given me, by diffused kidney disease. S—— had enjoyed good health till his twenty-second year, when he commenced to have a sensation of weight and pressure after meals, suffered a great deal from flatulency, and had some eructations. He had never been afflicted with lead colic, lead-poisoning being anyhow a far rarer occurrence in fresco painters than in common painters. S—— had been attended for a time by a very conscientious, skilful, and old physician, who had benefited him greatly, and who told him also that he should be careful and never expose himself to cold and inclement weather, as his urine contained albumen, and this might possibly lead to Bright's disease. The physician died, and N. S——, beginning again to suffer from dyspepsia, called on me. On examination, I detected albumen in the urine, but no tube-casts. Auscultating the heart, I found the second sound of the organ accentuated, and this was especially clear over the aortic valve.

This observation had the more interest for me, as I had noted the same fact for over three years already on F. J. M——, Chr. F——, P. McL——, and W. C——, while in Louis M—— the disease had progressed still further. There were occasionally epithelial casts in the urine of the latter. Beside, Louis M—— complained of palpitation, and though by percussion hypertrophy could not as yet be demonstrated, the heaving impulse and the also stronger first sound of the heart indicated only too well the approaching danger.

I attended N. S—— for about a year. But while his dyspeptic symptoms had undoubtedly improved, the urine still continued to contain albumen regularly, and the heart-sounds became louder. The want of greater improvement was partly due to the fact that S——, whenever his dyspeptic symptoms were milder, would be satisfied, and take neither his medicine regularly nor follow other directions given him, as he should have done. I saw him the last time alive May 8, 1880. His urine then contained epithelial tube-casts, beside albumen. The next day he fell from a scaffold, broke his skull and died. At the post-mortem I found a proof for the correctness of my diagnosis. Both kidneys were large and presented the initial state of an interstitial nephritis, exactly the same picture which Dr. O. Israel[1] has so well described. The endothelium of the aorta was softened and slightly thickened, the condition of the tissue under the microscope exhibited an exudation due to chronic endoäortitis. The muscularis in the small arteries was hypertrophied, and the lumen of the aorta without doubt decidedly enlarged. This was especially apparent in the ascending arch of the vessel. In fact the same condition was present as that which is artificially produced in animals after having been fed largely on nitrogenous substances (urea, nitrate of sodium, etc.). If there is a surplus of material which enters into the composition of the urine, especially urea in the blood, the heart as well as the aorta has a greater amount of work to do for the purpose of driving the blood as fast as possible to the kidneys, so that they may carry the obnoxious substances out of the circulation and the system.

If, now, in an individual there is the slightest, perhaps inherited, tendency to weakness in the arterial system, the consequences are clear. First, if large quantities of rich nitrogenous food are eaten, they alone, in a healthy person, and while no other disturbance anywhere exists in the system, will be tolerated in the blood and carried to the kidneys, there to be excreted. But if the quantity has been too large, or other circumstances are not favorable, so that the stomach and the small intestines become overburdened and digestion interfered with, then the blood pressure is altered and a transient congestion of the kidneys ensues. If the latter occurs oftener, or if a new element adds another factor, as, for instance, chilling of the surface of the body by cold, then a similar process commences as in a person with an hereditary weakness. The muscular coat of the smaller arteries becomes hypertrophied, an alteration of the blood pressure follows naturally, the lumen of the aorta is widened, the kidneys enlarge, and at last the endothelium of the arteries suffers, in consequence of the irritating character of the urine-forming compounds, and especially of the abundant urea. It is then that the interstitial nephritis begins and hypertrophy of the heart, followed often by dilated hypertrophy, commences. The murmurs heard occasionally over the heart in such cases are

[1] Virchow's Archiv., lxxxvi., p. 229.

as much due to the altered composition of the blood as to the changes going on in the endocardium and in the muscle of the heart and in the coats of the aorta.

In connection with this, and to endeavor to explain how, in certain cases, an augmentation of urea, the primary source of the evil, may take place, it is well to consider the experiments of C. Peyrani,[1] whose observations on animals justified him in the following conclusions:

The stronger an electrical current is, sent through the uninjured sympathicus, the greater is the quantity of the urine and the urea excreted by the kidneys, the induced current being, in this respect, more effective than the constant. If the sympathicus is divided and not irritated, the quantity of urine and urea sinks to its minimum, and the arterial blood of the kidneys assumes a black color. On irritating the peripheral end of the divided nerve, the quantity of urine and urea increases with the strength of the induced current, but the total quantity is smaller than on irritation of the undivided nerve.

For the purpose of finding the urea, which, after division of the sympathetic nerve in the neck is not excreted by the kidneys, Peyrani examined the blood of dogs, rabbits, and guinea-pigs, six to eight hours after division of the nerve, for urea, and comparing it with blood which, a week before the division, had been abstracted from the left femoral vein, he noted that, while before in dogs 1,000 grammes of blood contained 0.152 gramme of urea, this latter quantity increased to 0.164 gramme in the blood abstracted after division, and that a proportionate increase took place in the blood of other animals.

Hereditary influences are generally most apparent in the nervous system. When this peculiar tendency to irritability exists in the vaso-motor nerve, and is set in action by stimulation arising probably from the peripheral branches of the nerve in the stomach, and there due to heavy and not well digested meals, overloading of the organ with especially albuminous matters, a temporary surplus of urea and urine would first be the consequence, causing in its turn a transient congestion of the kidneys, indicated by the presence of albumen in the urine. The original cause then continuing to act, on the principle of acquired habit, and as "a point *minoris resistentiæ*, we can well perceive how this condition of affairs becomes stationary at last, how the endoaortitis, the enlargement of the lumen of the aorta, and all the other morbid lesions of the initiatory stages of diffused kidney affections are brought about—one producing the other till the chain is complete—and how disturbances of the stomach, if, under such circumstances, too frequently repeated, may, especially with the addition of another factor (dyspepsia, chilling of the skin, etc.), at last induce the same pathological changes in a person not predisposed to them, and how the whole morbid process may permanently develop itself in the manner above described.

As a consequence of the first transient congestion of the kidneys albumen appears in the urine, and this symptom is necessarily almost always accompanied by mild dyspeptic symptoms. Before the beginning of the interstitial nephritis the alterations in the blood-pressure become apparent already by the accentuation of the second sound and by the circulation being in general more active. With the appearance of tube-casts in the urine the actual commencement of the interstitial nephritis is indicated, hand in hand go the excitement of the circulation and the beginning changes in the heart, as evinced by the heaving impulse, louder first sound, and later by hypertrophy of the organ.

The further progress of the disease depends upon peculiarities in the constitution of the individual and upon other conditions favoring one issue more than another. The inflammation may continue its simple chronic inflammatory process or cause atrophy of the kidneys—recognizable by the albumen, tube-casts, rapid deterioration of the general health, great emaciation and absence of dropsy in uncomplicated cases, while fatty degeneration or a granular kidney may also be the result of the same initial pathological changes.

Concerning the diagnosis, we must remember, that, so far, by most physicians the beginning of Bright's disease was dated synchronously with the appearance of tube-casts in the urine, while a few spoke of prodromic stages, in which circulatory disturbances and changes in the coats of vessels were mentioned, but not recognized in the living body. But in the light of the foregoing observations we are able to go still a little farther back.

We recognize the first initial stage of therefore most chronic diffused kidney-affections, especially those which, without apparent cause, seem to grow gradually upon the individual, by the occasional presence of albumen in the urine in a person otherwise healthy, by dyspeptic symptoms recurring with the appearance of the albumen, or rather the first preceding the latter; and the second initial stage by the more continued presence of albumen accompanied by circulatory disturbances and accentuation of the first sound. These two prodromic stages are then followed by the initial symptoms and signs of interstitial nephritis—albumen and tube-casts in the urine, excitement of the circulation, as evinced by a heaving impulse and increase of heart-sounds, later hypertrophy, etc. We may mention here what we forgot to say above, that in all the prodromic stages the quantity of urine and of urea excreted is in the first initiatory stage increased *at times*, in the second *more permanently*. This increase of from four to twelve ounces per diem is occasionally noticed by the patient himself; more frequently it becomes first apparent by actual measurement.

From the foregoing the conclusions may be drawn that the examination of the urine in every case that comes under medical attendance is of the utmost importance, that a conscientious physician should make these examinations frequently, and that the latter are especially necessary in persons belonging to a family, in which morbus Brightii seems to arise from a constitutional taint, and lastly, that in applications for life-insurance careful and repeated examinations of the urine should be insisted upon.

Concerning treatment we may achieve a great deal of good, if we only have the morbid process continuously before our eyes. Such a patient should be placed on a mild diet, and nitrogenous substances less abundantly given. No overloading of the stomach is to be permitted, the digestion has to be looked after, and, if need be, assisted by artificial means, and existing disturbances corrected. The secretions must be kept open and the skin carefully protected against the vicissitudes of the weather. All remedies containing salts to be excreted by the

[1] La Sardegna Med., 1870; Biol. Centbl., 19, 1881; Senator's comment in the Centbl. f. d. Med. Wissenschft., No. 16, p. 229, 1882.

kidneys should be omitted and small doses of pilocarpia, digitalis, and similar drugs form the only diuretics. Cups should immediately relieve any transient congestion of the kidneys. The albuminate of tannic acid has so far achieved the best results in checking the drain of the system caused by the continuous loss of albumen, the main nutritive element of the blood.

In F. J. M——'s case I observed the first time, eight months ago, the presence of epithelial casts and the continuous presence of albumen in the urine. We know, especially from the investigations of Baumann and C. Preusse,[1] that benzyl bromide (C_6H_5Br.) causes in the urine, besides products of oxidation of benzyl bromide, the presence of substances which are the balance of the benzyl bromide in union with organic sulphurous and nitrogenous compounds. The latter are intermediate products of tissue-change, protected by their union with benzyl bromide from further alterations. This benzyl bromide seemed to me to be just the remedy for such cases. I gave it in doses of ten grains every four hours, and the result has so far been excellent. Not alone that the casts in F. J. M——'s case have not reappeared, but albumen has also ceased to be present. I gradually decreased the dose to three grains *ter die*, and the effect continued the same. In all the other cases I have not been so lucky, though also there the good influence of the benzyl bromide in diminishing the frequency of the casts and the quantity of the albumen, which, under the influence of this remedy, becomes again irregular in its appearance, was very apparent. But not a single one of the other cases will see the necessity of adhering to a limited diet. Some are willing enough to swallow medicine, but they do not think it worth while to abstain from good meals, rich in albuminous food. I have come to the conclusion, therefore, that if, in such cases, any fresh supply of nitrogenous substances is limited as much as possible, benzyl bromide by its peculiar effect upon the urates, etc., making them less irritating in character or promoting the formation of other unirritating compounds, will decrease permanently the amount of urea in the blood, so that the morbid processes may have a chance for their retrogade formation.

Under favorable hygienic conditions, at least, and if the morbid changes have not proceeded too far, a regeneration of the altered tissues may be possible by removing their original cause, the surplus of urea and of urine, forming irritating compounds in the blood. This once achieved, the dreaded organic lesion of the kidneys may be, perhaps, avoided or postponed, at least for a long period of time, life, therefore, prolonged, if not actually saved.

But while the science of medicine has of late made immense progress, and while we learn every day more and more how to prevent dangerous morbid processes, even if we are not able to cure always the once established lesions, persons who have the means and who wish to reach a good old age, free as much as possible from disease, should alter their relation somewhat to their physician. And here I may be permitted to make a few suggestions. As it takes a physician always some time to study the constitution and individual peculiarities of a person, the latter should be careful in selecting a skilful physician, but *keep him*, if once their choice is made. They then should either visit their physician at stated intervals, say once or twice a week, or have their physician visit them. He can then best teach them the way they should live, what diet is best for them, and guard them against many of the ills human flesh is heir to, or nip these in the bud, as it were, or at least postpone the fatal end often wonderfully long. Those who know the value of an hour in some diseases, and who are aware of the progress medicine has made of late, will see the truth of these remarks. Certainly such arrangements can only be made by the well-to-do, as a physician's time and his knowledge form his capital, from the interest of which he must live; but by the establishment of really effective Boards of Health, much may be done also for the general population.

507 Franklin Street, Philadelphia, Pa.

[1] Zt-sch. f. phys. Chemie, vi., p. 307, 1882.

CHINOIDINE AND CAPSICUM IN INTERMITTENT FEVER.

By R. C. M. PAGE, M.D.,

new york.

Case I.—J. C——, iceman; born in Ireland; aged twenty-two, and single; has resided in New York City during the past fifteen years. Had a chill for the first time September 24, 1880. It came on about 10 A.M. and lasted an hour. It was well marked and was followed by the usual symptoms of headache, fever, vomiting, and sweat. The chill returned on the 26th and 28th, in the forenoon.

I saw him for the first time September 29, 1880. He had received no antiperiodic treatment, but had taken some "opening medicine" the day before, and his bowels had moved three times. General health good. Never drank to excess, but was in the habit of taking a glass of whiskey occasionally.

Treatment.—Ordered three powders, each containing ten grains of powdered chinoidine and three grains of capsicum. To take one powder at bedtime, one at 6 A.M., and one at 12 M. next day. In order to make sure of his taking the whole powder, he was directed to shake it on his tongue from the paper, and to take a swallow of water afterward.

October 1st.—Chill has not returned. Ordered tr. ferri chloridi, in ten-drop doses well diluted, four times daily, and to continue the same for two weeks. I saw him three months afterward, and he stated that there had been no return of the chills.

Case II.—J. M——, laborer; born in Ireland; aged fifty-four, and married; has resided in New York City most of the time since 1849. About the middle of May, 1880, he went over to Hunter's Point, L. I., and remained there five weeks. During the last ten days of his stay there he had chills and fever for the first time in his life. I first saw him June 20th, following, and treated him with powdered chinoidine and capsicum. He was cured for the time, but was quite anæmic, and left off treatment too soon. As a consequence the chills returned.

September 27, 1880.—Patient applied to me again. Has had chills and fever off and on ever since I last saw him. During the past week he has had a chill every day. Bowels regular, but he is very anæmic.

Treatment.—Ordered six powders, same as in Case I. To take one powder before breakfast and at noon every day.

September 30th.—No return of chills. Ordered tr. ferri chloridi as in Case I. After two days the powders were repeated once and the tr. ferri chlo-

ridi pushed for a month. There had been no return of the chills when last seen six months ago.

Case III.—K. M——, aged fifteen; born in the United States; resides in New York City. Had a chill for the first time August 20, 1880. She had them every other day for about ten days when she took a bottle of "fever and ague cure" and got well, as she thought. I first saw her October 15, 1880. Had been having chills and fever off and on ever since the first attack. During the past week she had one every other day. Bowels constipated, and she is anæmic.

Treatment.—Ordered pil. aloes et ferri, to take one or two at bedtime as required to regulate her bowels, and powders of chinoidine and capsicum (gr. x. to j.).

October 18, 1880.—No chill since I last saw her. Ordered three more powders, to take one every day before breakfast, and to take tr. ferri chloridi as above described, and to continue it for a month.

There was no return of the chills up to February, 1882, when she was last seen.

The foregoing three cases are average descriptions of 140 cases of intermittent fever that have been treated by me during the past two years, of which I have any notes. Of these, 10 were treated with tinct. iodine without any appreciable benefit. The remaining 130 were treated with powdered chinoidine combined with capsicum, the dose of the former being always 10 grains, and the latter 1 to 3 grains, according to the age, sex, and habits of the patient. Women and young people (not children) were given, as a general rule, only 1 grain of powdered capsicum. Men were given 3 grains, and beer-drinkers, of both sexes, were given 3 to 5 grains of powdered capsicum at each dose.

In only one case was vomiting produced by the powders. In large doses, however, and especially with children, chinoidine not unfrequently causes vomiting.

Of the 130 cases treated with chinoidine and capsicum the chills soon recurred in 9, evidently because the patients left off treatment too soon. Five were benefited, though not cured, that is to say, the chills returned from time to time. This was doubtless due to their locality, occupation, etc., and nothing short of a change would effect a cure. Twenty-two cases were only seen once, but I believe that they were cured, or else they would have returned, since the majority of them were dispensary patients, having applied for treatment at the North-Western Dispensary in this city.

Of 20 cases of intermittent fever recently treated by Dr. J. C. Mackenzie, of this city, in a similar manner, in only one case did the chills return within two weeks, and he had only applied once, having failed to return for iron. In one case the chills returned after the expiration of two months, but he had evidently taken the disease over again.

Dr. John H. Ripley recently treated a case of intermittent fever by giving large doses of quinine every day for a week, without success. He then gave 20 grains of chinoidine each day for three days, when the chills ceased to recur.

The powder of chinoidine should not be obtained by pulverizing the resinous mass simply, as the particles would soon coalesce again. But if it be evaporated to dryness and powdered in combination with some inert substance, as althea, it will then retain its form. Thus prepared it is about half the bulk of sulphate of quinine, *and very much resembles in appearance the so-called dextro-quinine.* I have never given any other preparation of chinoidine than the powder, but see no reason why it should not be administered in the form of pills, capsules, etc.

Whatever be the value of chinoidine alone, it appears that in ten-grain doses, when combined with capsicum, it is nearly, if not quite, as good as quinine in breaking up ordinary cases of intermittent fever. Regulating the bowels, and following up the powder with iron in some form, preferably the tr. ferri chloridi, given frequently in moderate doses, and well diluted, appear to be necessary in order to effect a permanent cure.

With regard to chinoidine, Bartholow ("Mat. Med.") says: "When the mother liquor, left after the crystallization of the alkaloids of cinchona bark, is evaporated, a black residue is obtained which is called chinoidine. This contains amorphous quinia and cinchonia, and probably also quinidia and cinchonidia. It is a very efficient anti-periodic, and may be used with advantage as a substitute for quinia in doses about twice as large."

According to Nothnagel and Rossbach ("Handbuch der Arzneimittellehre," Berlin, 1880), chinoidine is "a resinous, dry mass, of a brown color, slightly soluble in water, but readily soluble in alcohol. This very cheap preparation is essentially a mixture of quinine, cinchonine, and resinous matters. The dose is considerably larger than that of quinine."

Prof. Binz, of Bonn, says: "When pure the action of chinoidine approximates that of quinine. The effect appears much more quickly, but passes off more rapidly than in the case of quinine, on account of its being more rapidly excreted" ("Grundzügs der Arzneimittellehre," Berlin, 1879).

In view of the fact that quinine is very much more expensive than chinoidine, and that the latter can be used, when combined with capsicum, in as small doses as quinine, with equally good effect in the cure of most cases of ordinary intermittent fever, it would be a considerable saving of money to the laboring classes, in such cases, to buy chinoidine and capsicum instead of quinine—or even the other alkaloids of cinchona bark.

31 West Thirty-third Street, New York, September 28, 1882.

A SIMPLE MEANS OF CHECKING PULMONARY HEMORRHAGE WITH SHAWL-STRAPS.

By H. HOLBROOK CURTIS, M.D.,

NEW YORK.

A year ago I had occasion to try strapping the extremities in a severe case of pulmonary hemorrhage, where the attacks rapidly followed one another. The free hemorrhages were so quickly controlled by this convenient method of treatment that I should like to record my observations on the subject. The first case upon which the straps were used was as follows:

Mr. B——, aged twenty-one, had lately returned from the Adirondacks, where he had sojourned for two years. His case had been pronounced so much improved that he was permitted to remain at home, where he had been spending the months of April, May, and June. By over-exertion he experienced a severe hemorrhage from one or both lungs, which recurred every few days and sometimes with but a few hours' interval. Ergot and ergotine internally

and by hypodermic injection, gallic acid, turpentine, etc., were each successively tried, but did not control the hemorrhages, until the patient, of a somewhat robust nature, was completely exhausted. Alarmed by the excessive bleeding and also by the frequency of the attacks, I had a pair of ordinary shawl straps punched with holes a quarter of an inch apart, and also braided three strands of drainage-tubing, making two cords of as many feet long. The next hemorrhage being an excessive one, I laid a folded napkin over each femoral vein just below the fold of the groin, and adjusted the straps about the thighs as high up as possible, so that the buckles would be over the napkins. I then proceeded to tighten the straps as much as I conveniently could, intending to stop the venous return without interfering with the arterial supply of the extremities. Having drawn these up tightly, I hastened to bind the arms near the shoulders with the rubber tubing. To my surprise the hemorrhage was checked almost immediately, and in about five minutes I loosened the straps and tubing. This was no sooner accomplished than the patient complained of a great shock to "the sore place," and the bleeding commenced again. The same procedure checked it almost as quickly as before, the sudden decrease in the pulmonary arterial tension following the temporary removal of so much blood from the circulation allowing a coagulum to form. The straps also afforded such relief to his dyspnœa that the patient begged me not to remove them. In about five minutes, the extremities becoming markedly cyanotic, the straps were loosened, a hole at a time, when no hemorrhage recurred.

By this method alone I as successfully checked no less than fourteen hemorrhages, the patient placing such confidence in the straps that he refused to allow their removal, but kept them loosely about his limbs. His shallow and difficult respiration was greatly relieved by keeping an arm and the opposite leg strapped. At the end of five minutes, however, or as soon as the members became mottled and blue, it was advisable to change and strap the opposite limbs. This often diminished the respirations five to ten a minute, my patient becoming very dependent on this means of relieving his dyspnœa. Mr. B —— would frequently remark to me, "Wait until I go back to the woods; I will then show them how to stop a hemorrhage"—referring to the little band of consumptives who gather daily to take their temperature and discuss their symptoms at Saranac Lake. Since this, which I present as a typical case, good fortune has enabled me to observe the effects of this method on four patients, the results being as good or nearly so. My esteemed friend, Dr. W. G. Thompson, of the New York Hospital staff, reported that he had tried my method last winter on a patient in one of his wards, who had resisted all other means employed to stop his hemorrhages, and obtained immediate relief. At the time, I supposed myself to be the initiator of this method of controlling pulmonary hemorrhage, but have since learned that Galen made use of some such means, and more recently Dr. Detmold, of this city, is said to have employed somewhat the same principle in hemorrhage in general, and also to relieve the dyspnœa of pneumonia. Esmarch also suggested tying the extremities in gunshot wounds of the lungs. The tradition among the laity that a string tied around the finger or toe would relieve nose-bleed undoubtedly descended from an ancient practice of so relieving hemorrhage, the string having likewise ascended on the extremity. I neither dispute priority with Galen nor Dr. Detmold. The one claim to originality I advance is the employment of the ever-ready shawl-strap, which simple means I recently had an opportunity to employ successfully on the top of a stage-coach. If this method has been advanced previously, I would like to ascertain why it is not more generally used, and call the attention of practitioners and the laity to a method convenient in its simplicity and efficacious in its application.

251 Madison Avenue, September 26th.

Reports of Hospitals.

BOSTON CITY HOSPITAL, BOSTON, MASS.

Service of W. H. THORNDIKE, M.D., and C. D. HOMANS, M.D.

(Reported by Royal Whitman, M.D., House Surgeon.)

SPONGE-GRAFTING.

Case I.—The patient, a Swede, came to the hospital January 31, 1882. His history was as follows: About seven weeks before entrance, without known cause, commenced to have pain, swelling, and tenderness in each groin. These symptoms rapidly increased, and were accompanied by fever and general prostration. Examination showed several large suppurating buboes in each groin, above and below Poupart's ligament. The patient was weak and emaciated. The abscesses were opened and stimulants and tonics were given. His condition did not improve. Suppuration increased and was accompanied by considerable sloughing of the tissues in the right groin. In a few days the entire extent of Scarpa's triangle was exposed, and the saphenous veins and the sheath of the femoral vessels could be seen at the bottom of the wound. He then began to improve, and on March 13th there was a clean granulating surface, triangular in shape, about three inches long, two and one-half inches wide at its base, and three-fourths of an inch in depth. There was also a small, granulating surface above Poupart's ligament, on the same side, and several small suppurating buboes on the left side, which showed no tendency to heal after incisions. The large, granulating surface having been thoroughly cleansed, two sponges, which had been previously prepared by soaking in dilute nitro-muriatic acid, to remove the lime salts, were accurately adjusted to the surface and pushed under the undermined edges of the wound. The sponges were then covered with oiled silk and a carbolized compress.

On the following day, March 14th, there was no change in the appearance of the sponges. They were thoroughly irrigated with a carbolic solution (1 to 40), and dressed with absorbent cotton and iodoform.

On March 18th there was considerable suppuration about the wound, and a slight odor. The sponges were firmly adherent to the surface. Sponges irrigated twice daily with 1 to 20 solution carbolic acid.

March 26th.—Considerable suppuration, and quite a disagreeable odor.

March 29th.—Less suppuration. There is now a faint reddish tinge about the edges of the sponges. No redness or induration of the surrounding tissues. Patient's general condition much improved.

During the following week there was no particular change. The reddish tint gradually became more marked.

On April 13th the extent of the wound was considerably reduced in size the edges rapidly closing in above the sponges.

April 27th.—Several small projecting portions of the sponge were removed. The entire surface of the sponge was now quite red and bled freely on being cut.

May 4th.—Granulations could now be seen coming up through the openings in the sponge, which was rapidly being absorbed.

May 18th.—The larger portion of the sponge has now been absorbed. The granulations are now level with the surrounding tissues. Extent of the granulating surface is much diminished.

June 8th—only a few shreds of sponge can now be seen on the granulating surface, which is about one inch in diameter. No pain or tenderness. Considerable induration over the grafted area. No puckering of the skin.

June 29th.—Discharged with a small granulating surface, about three-fourths of an inch in diameter. Still a small amount of suppuration from the smaller abscesses in the opposite groin, which had not entirely healed.

There was a peculiar, solid, indurated feeling about the grafted area. There was no pain or tenderness, and no contraction of the surrounding tissues.

Case II.—The patient, a woman, seventy years of age, entered the hospital March 4, 1882. Has had ulcers on the legs for the past fifteen years.

Examination was as follows: On the left leg, just above the external malleolus, was an ulcer, two and one-half to three inches in length, oval in shape and about one and one-half inches in diameter, and one-fourth of an inch in depth. Its edges were thickened and indurated and its base covered with a slough. The integument of the leg was pigmented, showing the scars of former ulcerations. On the right leg, about two inches above the external malleolus, was an ulcer, slightly smaller than the preceding, with indurated, adherent edges, and at the junction of the upper and middle third of the leg, upon the inner surface of the tibia, was a similar ulcer. Both legs were swollen and œdematous. Poultices were applied, and on March 11th the surfaces of the ulcers had nearly cleaned off, and were covered with pale, indolent granulations. The ulcerated surfaces having been thoroughly cleansed, sponges which had been previously prepared with nitro-muriatic acid were accurately adjusted to the surfaces of the ulcers and covered with oiled silk and pads of salicylic cotton.

On the following day the sponges were irrigated with carbolic solution (1 to 40), and dressed as before. Patient says that the dressing is a very comfortable one.

March 17th.—No odor; an increased amount of purulent discharge; slight reddish tinge about sponges, which are now firmly adherent.

March 20th.—Slight odor; reddish tinge more marked; sponge bleeds on being pricked. Dressed with boracic acid and pads of absorbent cotton. This dressing caused her so much pain that it was omitted on the following day and iodoform was substituted.

March 26th.—The area of redness is rapidly increasing and numerous granulations project through the openings in the sponge.

April 10th.—Sponges are now almost uniformly red; there is but slight discharge from them and no odor. Patient discharged.

August 15th.—The patient, immediately after her discharge from the hospital, commenced walking about. Swelling of the legs followed, which she attributed to the presence of the sponges. She tore out as much of the sponge as possible, and is now in about the same condition as upon her entrance to the hospital.

Case III.—The patient, a boy, sixteen years of age, entered the hospital May 5, 1882. His history was as follows: About five weeks before entrance, without apparent cause, commenced to have acute pain in the leg, which was soon followed by swelling, induration and considerable constitutional disturbance.

Examination showed the left thigh to be much swollen, surface slightly erythematous. There was deep fluctuation, especially marked on the inner surface of the leg. The knee was semi-flexed, and the mobility of the hip- and knee-joints was much impaired by muscular spasm.

There was intense pain in the leg, increased by motion. The temperature was high, and the patient was delirious at night.

May 7th.—Incisions were made on the inner aspect of the thigh, and a large amount of pus was evacuated. On May 9th counter-openings were made, and the lower extremity of the femur was found to be extensively necrosed.

During the next few weeks the patient continued in about the same condition. His temperature continued high, and there was a large amount of suppuration.

May 30th.—Fluctuation was discovered in the knee-joint.

On June 30th Dr. Homans amputated the thigh at the junction of the upper and middle fourth. The lower three-fourths of the femur was found to be necrosed, and there was a spontaneous fracture at the junction of the lower and middle fourth. There was also disorganization of the knee-joint. A long sinus was found, running from the extremity of the stump up to the tuberosity of the ischium, and a long horse-hair drain was inserted. The vessels were ligated with silk and catgut, but there was continuous hemorrhage from the femur, which could not be controlled, and which would evidently prevent healing by first intention. A carbolized sponge was then packed tightly into the femur, pressing back the marrow, and then it was cut off, on a level with the bone. This controlled the hemorrhage perfectly. The stump was dressed with iodoform and salicylic cotton. The first dressing was done on the fifth day, and the horse-hair drain and sutures were removed. There was almost complete union by first intention. The patient was up on the fourteenth day, and all dressings were omitted on the twentieth day.

Case IV.—The patient, a woman, thirty-five years of age, entered the hospital June 15, 1882, with a large medullary cancer of the breast, and enlarged glands in the axilla. The breast, with the pectoral muscles, was removed, and the axillary glands, large and small, were also removed. After the operation there was a denuded surface about six inches in diameter. The wound was dressed antiseptically in the usual manner until July 9th, when a sponge which had been previously prepared was inserted into the cavity of the axilla. July 14th it was firmly adherent. Since then it has slowly filled with gran-

ulations, the process of repair in the whole wound having been very slow. Owing to the position of the cavity, and the large size of the sponge, it has been quite difficult to keep it thoroughly cleansed. It has been irrigated with carbolic solution (1 to 40) twice daily, and the wound has been dressed with Lister gauze. There has been but little odor.

Remarks.—Case 1st was undoubtedly benefited by the application of the sponge. The large cavity filled up from the bottom, with no contraction of the tissues, and probably more rapidly than it would have done without the application.

Case 2d would probably have been benefited had she remained longer in the hospital.

Case 3d.—The application of the sponge to the bleeding bone promoted healing by first intention—by controlling the hemorrhage. It would seem, however, that in such cases the application of some substance which would be more easily absorbed than sponge would be preferable, such as shreds of gold-beater's-skin.

Case 4th.—In this case the result has not been successful, and the sponge has probably retarded the closing of the wound somewhat.

These cases comprise all the sponge-grafting that has been done at this hospital. It will be seen that this method of treatment has not been followed by the remarkable results that have been reported in the English journals.

Sponge-grafting seems to be of use in a certain limited class of cases, such as deep, circumscribed ulcers of the leg, which are often followed by adherent cicatrices, which readily break down. In these cases the sponge forms a trellis-work, through which the granulations spring up from the bottom of the wound, thus preventing the contraction from the edges. The sponges used in grafting should be perfectly clean, and thoroughly carbolized. They should then be soaked in dilute acid until they become quite friable, in order that they may be absorbed more rapidly.

EPISCOPAL HOSPITAL, PHILADELPHIA.

SERVICE OF LOUIS STARR, M.D.

(Reported by THOMAS R. NEILSON, M.D., ex-Resident Physician to the Hospital.)

A CASE OF PNEUMONIA OF THE APEX WITH MARKED CEREBRAL SYMPTOMS.

GEORGE McM——, aged forty-five years, a weaver by trade, was admitted to the Episcopal Hospital on the evening of September 27, 1881.

His friends, who accompanied him to the hospital, stated that his habits were intemperate, that he had been on a spree only a day or two before. They knew of no previous illness except an "apoplexy," which occurred "sixteen years ago," and which was followed by paralysis of the right side, from which he slowly, but completely recovered.

No definite history of the onset of this attack could be obtained. In addition to drinking to excess, he had been exposed to the sun the day before he was taken ill. During the day, while at work, he had several times complained of "feeling badly," and in the afternoon he suddenly became "almost speechless." On admission to the hospital there was constant swinging backward and forward of the right arm, as if in the act of feeding a loom; there was almost complete aphasia, the patient being able to utter only three words, "through great misery," which he repeated over and over again, rather indistinctly, in answer to any question; the face was flushed; the right foot was dragged when he attempted to walk; the tongue was coated and moist; physical examination of the abdomen yielded negative results. The temperature was 106°. There was no cough. The patient was placed in bed, and potass. bromid., gr. xxx., ordered to be given at ten o'clock and at six o'clock the following morning.

September 28th.—At 6 A.M. had a convulsion lasting for four or five minutes. 8 A.M.—Breathing stertorously. The right nostril is paralyzed, flapping with each inspiration. The hands and feet are held rigidly flexed. The patient is entirely unconscious. Occasionally he cries out, or sometimes mutters so loudly as to disturb the ward. Urine voided freely in the bed. Temperature, 105°; pulse good in volume, and slow. A simple enema was ordered. Diet, milk, which, however, he could not be made to swallow. No medicine to be given. In the afternoon an ounce and a half of blood was drawn from the nape of the neck by means of an artificial leech. Urine obtained by use of the catheter examined and found to contain a trace of albumen. 6.30 P.M.—Temperature, 103°.

September 29th, 8 A.M. — Still unconscious. There are decided signs of cerebral irritation. The breathing is quite natural. Temperature, 103°; carotid pulse, 72, full and strong. Bowels not moved yet. Urine passed freely. While this note was being written, the patient raised himself up in bed, and suddenly became conscious. He could not speak and was very irritable, actively resisting the nurse's efforts to give him a little milk. He was finally persuaded to take about four ounces of it, which he swallowed without difficulty. Ordered potass. bromid., gr. xxx., thrice daily and as much milk as he would take.

September 30th, 8 A.M.—Conscious, but almost entirely aphasic. The cerebral irritation has entirely disappeared. The skin is cool. The bowels not having been moved yet, magnesii sulph., ℥ ss., was ordered for him. The regular treatment was changed to potass. bromid., gr. xx., with potass. iodid., gr. x., three times daily.

October 1st, 8 A.M.—There is not much change in the general condition since yesterday morning. The mouth is drawn slightly to the left side, and the right arm is tremulous as it lies on the bed. The temperature, 101°. Bowels still confined. Enema ordered, and chloral hydrat., gr. x., three times a day, added to treatment. 6.30 P.M.—Temperature, 98¼°.

October 2d, 8 A.M.—Calls out to imaginary horses, and seems to be startled by objects from which he shrinks. Cannot draw up the right leg as well as he can the left. Temperature, 98°. The bowels were moved by the enema given yesterday. Treatment changed by discontinuing the iodide of potassium, and adding tinct. digitalis. It now stands: potass. bromid., gr. xx., and chloral hydrat., gr. x., every three hours; tinct. digitalis, gtt. xv., three times a day. Beef-tea added to the diet. An enema containing turpentine was ordered, and was answered by a scanty stool. 6.30 P.M.—Temperature, 102°.

October 3d, 8 A.M.—The patient is much more quiet to day. The pulse is a little weak. Temperature, 100°. The chloral was discontinued. 6.30 P.M.—Temperature, 101.5°.

October 4th, 8 A.M.—No change since yesterday, except that he is a little weaker and cannot move

his right leg well. Temperature, 99.5°; pulse, 116. The treatment was ordered to be changed to ammonii carbonat., gr. v., and tinct. digitalis, gtt. xv. every four hours; potass. bromid., gr. x., every three hours. 6.30 P.M.—Temperature, 99°.

October 5th, 8 A.M.—Slept very well last night. Much weaker this morning; very quiet and perfectly himself. The motions of the right leg are no longer impaired. The left pupil is dilated. A large bed-sore has formed over the sacrum. The bowels were freely moved this morning. Temperature, 98.5°; pulse, 112. Dose of carbonate of ammonium ordered to be increased to gr. x. every four hours, and whiskey, f ℥ iv. (in milk-punch) in twenty-four hours. 6.30 P.M.—Temperature, 99°.

October 6th. 8 A.M.—Much better than he was yesterday, though still very weak. The pupils are even. Temperature, 98°; pulse, 112. The bowels were moved three times in the last tweaty-four hours; passages were formed and natural. Bromide ordered to be stopped; quiniæ sulph., gr. iv. (in lactic acid solution), to be given hypodermically in the afternoon. 6.30 P.M.—Temperature, 101°.

October 7th, 8 A.M.—Skin hot and dry; tongue loaded with a heavy white fur, and moist; hands and arms tremulous. There is a slight cough. The temperature is 99.5°; the pulse, 108°. 6.30 P.M.—There is now active talking delirium. Temperature, 103°; pulse 124. Quiniæ sulph., gr. iv., given hypodermically, and potass. bromid., gr. xx., ordered to be given every three hours.

October 8th, 8 A.M.—The patient is much weaker. The delirium has become low and muttering. Temperature, 103°; pulse, 140. Quiniæ sulph., gr. iv., hypodermically, to be given every eight hours. 6.30 P.M.—Temperature, 101.5; pulse, 140.

October 9th, 8 A.M.—General condition about the same as it was yesterday. There is some œdema of the right hand, and hypostatic congestion of both lungs, more marked in the left. The bowels have been moved three times in the last twenty-four hours. Temperature, 101°; pulse, 136. Ordered amount of whiskey to be increased to f ℥ viij. in the twenty-four hours, and the chest to be rubbed with a liniment composed of spt. terebinthinæ and linim. ammoniæ, and a cotton jacket to be placed around it. The patient grew steadily weaker during the day and died at 4.20 P.M.

Post-mortem examination, October 10th, at noon. —*Brain:* Veins of pia mater of left convexity slightly engorged. *Thorax:* Pneumonia of left apex in the third stage, the upper part of the lower lobe of the same lung was in the second stage of the disease. Hypostatic congestion of both lungs.

The other organs were examined and found to be healthy.

Remarks.—This case of cerebral pneumonia is worthy of being recorded for two reasons: first, the comparatively rare occurrence of apex pneumonia in the adult, and secondly, the severe type of the cerebral symptoms which were present. In children, more especially very young children, the apex is perhaps more frequently attacked than the other portions of the lung, and in them, too, cerebral symptoms, delirium, convulsions, coma—not at all rare when any portion of the lung is attacked—are more frequently met with and more prominent when the apex is the seat of the disease. In the adult there is the same tendency to cerebral disturbances when the apex is involved. Heinze, quoted by Juergensen (Ziemssen's "Cyclopedia"), states that in "one hundred and seventeen cases in which" the upper lobes were attacked, either alone or in connection with other lobes, forty-seven presented severe head symptoms (40.2 per cent.); out of two hundred cases, in which the lower lobes were alone affected, there were only fifty-one in which the symptoms in question were present (25.5 per cent.). The cause of cerebral symptoms lies in the character of the fever, which develops suddenly and rises rapidly. Juergensen says: "Experience shows that the most severe cerebral symptoms usually occur in connection with pneumonia of the apex setting in with a rapidly developed fever."

It can easily be understood why children, who are attacked more suddenly and with comparatively greater severity by diseases accompanied by fever than adults, should be more subject to nervous symptoms.

In conclusion, there seems to be no special time in the course of the disease at which head symptoms may show themselves; indeed, they may appear even after defervescence; and, of course, they may vary widely both as to their character and intensity.

Progress of Medical Science.

SURGERY AND THE DOCTRINE OF EVOLUTION.—C. Pittfield Mitchell, M.R.C.S., of Orange, N. J., contributes to the *New York Medical Journal and Obstetrical Review* for September, 1882, an essay, entitled, "An Evolution Aspect of the Healing of Wounds, with Deductions as to Treatment." As the author tells us in a prefatory statement, this is an application of the Spencerian doctrine of evolution to some of the phenomena of reparative action. The essay sets out with a classification of methods of repair from the standpoint adopted. Next, the grounds for this classification are given, and incidentally we are introduced to an important conception—arguing that, since whatever is profitable to an organism, in the way of structural or functional variation, will be taken advantage of by heredity and natural selection, the functional changes naturally involved in recovery from disease will come within the sphere of their operations. With the zymotic diseases, for instance, natural selection may segregate, and heredity may fix both the physiological peculiarity which insures immunity, and the physiological activities which establish the *status quo* when the disease has been contracted. Entering upon the immediate topic of the paper, the phenomena elicited by an incised wound, as the occlusion of arteries, the organization of plastic lymph, the development of granulations, and the physiological adjustment of the tissues to new external conditions, are viewed as non-specific functions of the tissues injured superadded to their specific functions. Deducing the evolution of these phenomena from the known action of physical forces, the shares taken by natural selection and sexual selection as factors are then dwelt upon. Special attention is directed to the protective value of the plastic lymph forming on the surfaces of wounds, and the evolutional steps are described by which this function is acquired. Passing from the structural, the evolution of certain more strictly functional adaptations is next considered. Knowing, in general terms, the atmospheric and other forces to which wounded tissues in the past must

have been exposed, the corresponding accommodations of function are inferred. Thus, the general conclusion is drawn that "the molecular constitution of wounded tissues should fit them, on the average, for contact with a mean atmosphere, and certain moderate deviations from this mean." It is pointed out that, although traumatic injuries are not necessarily accompaniments of life, they are of such frequency among the lower animals and man as to give validity to this conclusion. An absence of organized adjustments of function to the remaining forces commonly incident upon wounds is inferred from the inconstancy, diversity, and nature of these forces. Such deductions are shown to harmonize with experience, and certain principles of treatment for healthy wounds are presented as corollaries. The gist of them is, that, so far as the exigencies of practice will permit, wounds should be shielded from the incidence of any force to which we may know *a priori* there can not exist an organized adaptation. A normal atmosphere should be maintained, and cleanliness should be absolute at every step. Believing that the plasma exuding from the severed tissues is, by "its chemical and mechanical properties, and contact with environing forces during evolutionary time, specially fitted to protect the less stable cells which lie underneath," much importance is attached to the preservation of its integrity. "Wounds should remain open until the surfaces have become glazed, and all interfering applications should be scrupulously withheld." Finally a verification of these inferences is found in the facts disclosed by Dr. McVail, in his paper in the *British Medical Journal* for July 23, 1882, on the results of "Ten Years' Surgery in Kilmarnock Infirmary." The method of dressing employed (dry-dressing) essentially fulfilled the above-mentioned theoretical requirements, and gave, on comparative analysis, the "best general results covering a lengthened period of time that have ever been recorded in the history of British hospital surgery;" and the last group of cases reported—numbering 421, including 90 operations, 23 major amputations, 45 injuries, 52 abscesses, and seven compound fractures—showed not a single fatality from any cause.

Infectious Pneumonia.—Germain Sée, in *L'Union Médicale*, Nos. 76–79, 1882, distinguishes three varieties of infectious pneumonia. 1. Pneumonia caused by malarial infection of the intermittent type. 2. Erysipelatous pneumonia, arising from the extension of facial erysipelas downward through the trachea and bronchi. 3. Typhoid pneumonia. Under the latter he does not include pneumonia with typhoid symptoms, nor hypostatic pneumonia, occurring in the course of a typhoid fever, but an inflammation of the lungs, arising in the first stages of typhoid fever and existing as the chief or only local expression of the typhoid poison. Infectious pneumonia is characterized by its asthenic symptoms. The disease first shows itself by repeated chills and an irregular rise of temperature, and it subsides, as a rule, gradually, seldom by crisis. There is frequently inflammation of other organs—the kidneys, pleura, pericardium, etc. Accompanying it there is enlargement of the spleen, with icterus, marked disturbance of the sensory functions, prostration, etc. Ordinary croupous pneumonia the author considers to be a local, not a general disease.

An Unusual Relation between the Placenta and the Membranes.—In the September number of the *New York Medical Journal and Obstetrical Review*, Dr. Henry J. Garrigues, of New York, describes a very remarkable relation between the membranes and the placenta. The placenta measured twenty centimetres in diameter, the cord sixty-four centimetres in lenth, and both were of nominal thickness. The cord was inserted centrally. The membranes which had contained the child did not adhere to the edge of the placenta, but started from the point of insertion of the cord on this organ. Measured in a flaccid condition, hanging down around the cord, this bag was forty-one centimetres long. It was easily separated into two layers. The inner layer was covered with the epithelium characteristic of the amnion, a single layer of flat polygonal cells, which were in a state of fatty degeneration, as proved by numerous oil-globules found in their interior. The outer layer consisted only of connective tissue, which, in some places, contained a few round or oval cells, and many fat-drops. In other places some loose shreds were found on the outer surface, which showed a greater number of similar cells. At the placental end of the cord the sac was seen to form a kind of triangular mesentery, embracing the first eleven centimetres of the cord, and attached to the sac to a similar extent. The two layers forming this fold were not united, so that the finger could be pushed in between them up to the cord; but at the lower end (*i.e.*, nearer to the fœtus) they grew together, so that a pouch was formed between the "mesentery" and the cord, admitting half the length of the index. At the placental end of the cord there was found in the interior a small clear vesicle of the size of a pea (the umbilical vesicle). The placenta presented a common, shining, smooth fœtal surface, and rough maternal surface. The edge looked ragged, as if something had been torn from it, and in one place even a small, square piece of membrane about two centimetres in either direction was found attached to it. This membrane had no epithelium, and was composed of an inner layer of connective tissue, and an outer layer containing many round and oval cells. From the fœtal surface two membranous layers could be dissected off. The most superficial was exceedingly thin, the deeper one comparatively thick, and bound by isolated fibres to the placental tissue. The fœtal surface had no epithelium. The chief point of interest was that the sac in which the fœtus was placed, and which contained the amniotic fluid, was not attached to the circumference of the placenta, but to its centre, all around the insertion of the cord. Microscopical examination showed that this sac was composed of the amnion and the chorion, but had only scant remnants of decidua attached to it here and there. On the other hand, the portion of membranes found attached to the edge of the placenta was composed of decidua and chorion without amnion, and the fœtal surface of the placenta had no amniotic epithelium. Dr. Garrigues supposes, therefore, that the placenta all around was separated, after the birth of the child, from the decidua, which remained attached to the interior of the womb. Secondly, that the amnion and the chorion together formed a fold from the circumference to the centre of the placenta, which fold on one side was open, and formed the meso-cord described. Such a folding was perhaps brought about by accumulation of fluid between the chorion and the decidua after the formation of the placenta. At first he supposed that the amnion alone partook of the folding; but then we should find, he adds, on the sac surrounding the fœtus, the line where the chorion had been torn,

and there was no trace of anything of the kind. He thinks, therefore, we must conclude that the chorion remained close to the amnion all the way, and was folded with it so as to cover the fœtal surface of the placenta twice, as well as the amnion. This supposition is corroborated by the fact that two layers could be dissected from the fœtal surface of the placenta. The outer one was very thin, and this he took to be the chorion; the inner was thick, and this he explains as being the two layers of amnion grown together by their epithelial surfaces.

Acute Spinal Perimeningitis.—Lemoine and Lannois relate a case in the *Revue de Médecine* for June 10, 1882, in which a slight fall was followed in five days by paraplegia and symptoms suggesting acute ascending paralysis. The only lesion discoverable at the autopsy was a suppuration of the perimeningeal cellular tissue, which had caused, by compression, a rather extensive softening of the cord. The authors could find but one similar case, recorded by Levitsky, of Warsaw.

Stenosis of the Left Ventricle.—Rollet relates the following case in the *Wien. Med. Jahrbücher*, Heft II., 1881: A woman, forty-seven years of age, was admitted to hospital suffering from palpitation, thoracic pain, dyspnœa, and cephalalgia. There was no œdema of the limbs, no stasis of the pulmonary or hepatic circulation, no especial fulness of the jugular veins, nor any of the rational signs of mitral disease. The cardiac rhythm was irregular, the radial pulse small, compressible, uneven, and 104 to the minute. There was an increased area of dulness over the region of the heart, and the apex beat was exaggerated and to the left of normal. On palpation a very distinct thrill was perceptible, but felt only under the lower part of the sternum, to the left of this bone, and at the apex of the heart. On auscultation, a rather prolonged systolic murmur was heard, of maximum intensity, in the fourth intercostal space at the left border of the sternum. The second sound was short and feeble, but without murmurs, audible at the base, and in the carotids, thus showing the integrity of the sigmoid valves. A diagnosis was made of a true stenosis of the left ventricle without valvular lesions, and was confirmed post mortem. The hypertrophy was confined to the left ventricle, the walls of which were pale and presented here and there small spots of sclerosed tissue. The aortic orifice was normal. A fibrous band was found extending from the under surface of the aortic lip of the mitral valve to the interventricular septum and the aortic portion of the ventricle, at a little distance from the sigmoid valves. This new growth narrowed the aortic cone to such an extent that one finger could with difficulty be introduced. The author thinks this was due to an endocarditis of intra-uterine life. The patient had never had rheumatism. A similar lesion of the right ventricle was described by Dittrich in 1849.

Perforation of the Left Ventricle by a Round Ulcer of the Stomach.—The following case is related by Dr. Brenner in the *Wiener Medicinische Wochenschrift*, No. 47, 1881: A woman, fifty-five years of age, was admitted to hospital suffering from repeated hemorrhages of the stomach, from which she finally died. She had had a pleurisy on the left side some six months previously. At the autopsy the left lung was found to be retracted and closely adherent to the diaphragm. The two surfaces of the pericardium along the left border of the heart could not be separated without dissection, and the dilated stomach was also adherent along the lesser curvature to the diaphragm. About two inches from the cardiac orifice, on the lesser curvature, was a round ulcer almost as large as the palm of the hand, at the edges of which were seen the gaping coronary vessels whence the fatal hemorrhage had come. At the bottom of this ulcer was a sinus communicating directly with the cavity of the left ventricle, through an opening in the endocardium, the size of a pea. It is remarkable that, notwithstanding this perforation of the heart, there were no serious cardiac disturbances during life, and the hemorrhage causing death was from the open ends of the coronary vessels of the stomach, and not from the heart.

Treatment of Malignant Tumors by Electrolysis and Iodide of Potassium.—Professor Mariano Semmola, of Naples, presented a paper to the International Congress, in which he advocated the treatment of external malignant tumors by electrolysis. His method is to introduce both needles into the growth at some little distance apart. The applications may be made every day or two or three times a week, according to the size and duration of growth of the tumor. A mild current applied during a long sitting is preferable to a short application of a stronger current. The application causes pain. In conclusion, the author asserts: 1. Tumors of malignant nature can be cured by electrolysis. This result is attained (*a*) by exciting little centres of inflammation, with consequent formation of cicatricial tissue; (*b*) by inducing a fatty degeneration in the mass of the tumor, especially when the latter is already on the way to softening; (*c*) by provoking a suppurative inflammation, with consequent sloughing and disintegration of the tumor. 2. In conjunction with the treatment by electrolysis, it is necessary to administer large doses of iodide of potassium for a considerable time to obtain its alterative effects. The cure is slow but complete if one will but persevere. The author believes that the cure is permanent, but cannot assert it positively, as his cases have not been under observation long enough.—*Le Progrès Médical*, July 15, 1882.

The Treatment of Intussusception.—In the September number of the *New York Medical Journal and Obstetrical Review* Dr. W. R. Gillette, Physician to Bellevue Hospital, relates a case of intussusception in a child nine months old, relieved by injections of water, the administration of chloroform by inhalation, and manipulation of the tumor felt through the abdominal wall. This, he states, is the third case of intussusception in infants which he has seen, and which he has been able to reduce by these means. He thinks that these cases, from the philosophy of their condition, and the necessary measures for relief, are best managed in the way indicated. In two other instances, in which he saw and advised this treatment, reduction was utterly impossible under the other methods tried. The children in each of these cases were held while struggling, and the injections forced into them against all voluntary and involuntary efforts which they could make. He deems the administration of chloroform almost absolutely necessary in these cases. The reason is not difficult to find, inasmuch as, while it gives us such perfect control of the patient, it also eliminates the element of muscular spasm. Moreover, massage is a powerful adjuvant to the hydrostatic pressure of water in these cases. In the first two cases the obstruction was not overcome until massage also was employed.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, October 7, 1882.

POST-GRADUATE STUDIES.

THE establishment in this city of schools for post-graduate instruction is in many respects an evidence of the readiness with which the medical mind takes hold of a new idea and the earnestness with which it attempts to carry it out. It is eminently fitting that New York, the acknowledged medical centre of the country, should be the chosen field for taking the initiative of the movement. In fact, in no other place could any experiment of the sort be more satisfactorily tested. The field which from this point of view opens itself for cultivation is a large and fertile one, and capable of yielding the best fruits to conscientious and earnest workers. The want of just such training as a properly conducted post-graduate school can give, has been keenly felt by thousands of practitioners throughout the country. The evidences of this are in the rapidly increasing numbers who come to the city every winter for the purposes of attending medical lectures, of walking the wards of our hospitals, and of taking special courses.

There is hardly a medical man to be found in active business, outside of the larger cities, who does not look forward to the possibility of coming at some time to New York to make up what he knows to be his deficiencies in knowledge and experience. Many of these can obtain all they desire by attendance upon our medical colleges, going over much of the old ground afresh, and filling in the spare time by visiting our hospitals and dispensaries. But this is hardly calculated to satisfy the majority of post-graduate students. Whether such post-graduate courses as are promised this coming winter will meet their requirements, depends as much upon the particular plan of instruction adopted as upon the reputation and skill of the teachers. Everything in the way of success rests upon a proper appreciation of the real needs of the student practitioner. Generally it is safe to assume that he knows his own weak spots. No man can practise medicine actively for five or more years without gaining such a knowledge of his shortcomings. The latter are almost entirely in the direction of the clinical study of disease, in its wider, more comprehensive sense. His special studies must necessarily narrow themselves to such as tend to perfect him in diagnosis, and to add to his skill in treatment. In other words, the more practical his instruction the better. This, it strikes us, is to be the pivotal point upon which the real utility of any post-graduate course must turn. Didactic instruction must necessarily hold a secondary place to fill in what might otherwise be gaps in a full clinical course. In reality, however, there is more danger of doing too much in the way of formal lecturing than too little. How to avoid the former must be a matter for serious consideration with the instructor, for there can scarcely be any erring on the side of the latter. We believe we speak now in behalf of the men who may come here to make the most of their time and opportunities.

If we are to gain anything from the experience in post-graduate instruction abroad, we must look in the direction of the establishment of a polyclinic in connection with each school. The building up of such a clinic will, of course, take time, labor, and money. In the meantime such of the gentlemen as are connected with the larger hospitals should open their wards to the students and give daily instruction at the bedside to these classes. The larger dispensaries might also be utilized for such purposes, thus making available much material that might otherwise go to waste. In no more direct and more satisfactory way can the requisite amount and variety of clinical material be obtained. The most successful polyclinic will entice the greatest number of students, and will lay the foundation for the most successful post-graduate school. With the patients at hand, and with every member of the faculty an actual clinical teacher, it is then only a matter of detail to systematize instruction on a thoroughly practical basis, to divide the students into classes, and to give them every opportunity for thorough and personal examination of the leading symptoms of every disease brought to their notice. There is one thing in listening to the most graphic description of a heart-murmur and quite another in actually hearing it in the patient's chest; one thing in being told that a fracture exists and quite another in feeling the crepitus; one thing in seeing a blackboard illustration of a microscopical appearance and another thing in actually verifying the same on the field of the microscope itself. It is this kind of instruction that the student practitioner has a right to expect, that he is willing to pay for, and that the post-graduate schools that intend to be successful must give.

TEMPORARY HOSPITALS.

CIRCULAR No. 27, issued by the State Board of Health, is an instructive pamphlet upon the subject of "Temporary Hospitals." When sudden epidemics of small-pox or other acute infectious disease break out in a small town, it is often necessary to provide immediate quarantine, or, if the disease continue, to furnish hospital accommodations. For instruction and help in such emergencies the present circular has been issued. It contains a series of plans and sketches of temporary hospitals and refuge tents.

The first building is a small board hut, ten by twenty feet, with an average elevation of twelve feet. This gives an air-space of 2,640 cubic feet. It can be put up in a day and a night, at a cost of $65. It will accommodate one or two patients while a larger building is being erected. This larger building should be erected close by. It will measure twenty-two by thirty or forty feet, and will accommodate from eight to twelve patients. When finished, the first and small building can be used for convalescents. Plans for accessory structures for attendants are given. These can be put up whenever needed.

It will occur to every one that ordinary tents are better and cheaper than the structures here described. This fact is admitted in the circular, and designs for a refuge hospital tent are also given. In cold or wet weather, however, such an accommodation is quite insufficient, and then the temporary buildings will have to be erected.

It is evident that our State sanitary officers have exercised much care and forethought in the plans which they here offer. Their work will be likely to save much labor and expense on the part of others.

WHAT NEW YORK HAS DONE FOR PUBLIC HEALTH.

THE State Board of Health has sent us a batch of circulars which contain a number of items of interest.

A memorandum is given summarizing the duties of State and local health boards, and giving the latest statutes regarding sanitary matters. As is well known, the law establishing local health boards was at first permissive. It is now obligatory, and its provisions must be complied with everywhere, although penalties cannot be enforced except as the last resort. The local sanitary officers are made responsible for carrying out the provisions of the law. The question of compulsory notification of infectious diseases has, we should judge, been ingeniously evaded. Neither the doctor nor the householder is made specifically responsible for failure to report disease. The local authorities, however, are compelled to report the presence of all infectious diseases. It is to be inferred that a kind of local option is given as to how information regarding these diseases shall be obtained. A most important result from the present compulsory duties of sanitary officials is the securing complete returns of deaths, diseases, births, marriages, etc.

We suspect that the scope of our State sanitary legislation is much broader than is generally supposed. We have now, besides the laws organizing and maintaining boards of health in every city, town, and incorporated village, statutes providing for the compulsory vaccination of all attendants at public schools; also statutes forbidding the adulteration of food and drugs, and requiring the conduct of analytical investigations. The State Board is furthermore authorized to carry into effect the statute forbidding the use of such petroleum products as give off an explosive vapor at a temperature below 100° F. Every kind and mode of adulteration and deception in milk is prohibited. Either local boards or individuals can bring action in court to secure the infliction of penalties for breaking this law. Statutes framed as long ago as 1869, but subsequently modified, provide ways and means for securing public drainage wherever public health and a commission judicially appointed demand such general drainage works.

Our sanitarians are working diligently to do for public health whatever is possible. The way has been well opened, and progress has been made against what is generally the great obstacle, ignorance and indifference on the part of the people.

THE ELECTRICAL BATH.

DR. W. O. STILLMAN, in the *Philadelphia Medical and Surgical Reporter*, has called attention to and aroused some controversy over the subject of electrical baths and their therapeutical value.

It is true, as Dr. Stillman affirms, that ordinary treatises on medical electricity say little or nothing about it, Erb's recent "Handbuch der Elektrotherapie," and Beard and Rockwell's work being about the only exceptions. The subject has, however, been discussed in periodical literature. So long ago as 1874, Dr. Schweig published some interesting articles in THE RECORD upon the uses of galvanic and faradic baths. Chapot-Duvert, C. Paul, Lagrange, Barth, and others have also published clinical reports of their experience. From the testimony given it cannot be doubted that the electrical bath deserves a place in therapeutics, and that it should not be relegated so entirely to charlatans as heretofore. There are a number of prosperous quacks in this city who live in fine style upon the profits of electrical baths alone, using them largely in rheumatic and nervous diseases.

The administration of electricity by baths is not difficult. An ordinary bath-tub has often been used. It is better, however, that the tub be of some non-conducting material like wood. A double-cell faradic

battery will furnish quite enough electricity. The electrodes should be large, made of metal or carbon, and should dip several inches into the water. The patient lies in the tub so that neither electrode touches him. The current is passed generally from one shoulder to the opposite foot. It may, however, be localized. The general effect of the current can be strengthened by adding salt, soda, or an acid to the water. The baths are generally given for from ten to twenty minutes and repeated alternate days.

The claim for the electrical bath is that it is the best way to apply general faradization. It is certain that by the influence of the warm water the skin is made a better conductor. It is well known that the dry skin opposes immense resistance to electrical currents, and that it is largely by virtue of its pores that electricity passes through to a sensible extent. The warm bath moistens the skin, dilates its ducts, stimulating at the same time the cutaneous vessels and glands. The conditions are thus favorable for the so-called catalytic actions of the electrical current.

The objection occasionally made that water is a poor conductor and hence not suitable for electrical action is quite trivial. The resistance of pure water as compared with that of mercury is about 120,000,000 to 1; that of salt water, however, is better by only five or ten millions, and the resistance of salt water is nearly the same as that of the moist tissues. In other words, water is a vastly better conductor than the skin under ordinary conditions.

There is no reason *à priori*, therefore, why the electrical bath should not be useful, and we have referred to the matter at some length because it is quite possible for the general practitioner to prescribe and use it as well as the specialist.

Its real value, however, has of course to be tested by clinical experience. The authors already quoted have used it successfully in mercurial and alcoholic tremor, acute and chronic rheumatism, obstinate sciatica, neurasthenia, etc. Weisflog has used local electrical baths in rheumatism with good results. What is needed, however, is further careful clinical records which shall tell the failures as well as successes from this treatment. The former, we fear, as in electro-therapeutics generally, will not be rare.

THE HUDSON RIVER VALLEY.

The Hudson River Valley, says some sagacious writer in the New York *Times*, has a group of causes operating to depopulate it. The whole southern stretch of the valley, we are informed, from Newburg to Yonkers, is infected with malaria to a serious and dangerous extent.

To this sweeping judgment the *Yonkers Standard* strongly protests, and shows that the Yonkers death-rate at least is the lowest of any section in the State, being only thirteen per thousand. The valley of the Hudson, says this authority, is one of the healthiest in the world. It adds, however, by way of concession:

"We do die. The forms of disease are changing with us, as they are everywhere else. Types of malaria, to which we have been strangers, are in some degree known to us. They have lately penetrated all the New England States, have found lodgment in the Berkshire Hills and on the highest points of the Catskill Mountains, and have also made their appearance in scattered localities here. Its habitat seems to prove that it is no longer entirely climatic in its origin. It once was confined to low, marshy spots, and to unclean places. It now strikes the highest and the purest surroundings."

We conceive that the Yonkers journal is nearer the right in its defence of our valley. Taken as a whole the Hudson River country is healthful and has a low mortality-rate. At the same time, it is the fact that considerable malaria does exist, and may exist also without greatly increasing mortality. In fact, a country may be uncomfortably, though not dangerously, unhealthy. Such a stricture will apply to many parts of the locality in question.

Reviews and Notices of Books.

Diseases of the Rectum and Anus. By Charles B. Kelsey, M.D., Surgeon to St. Paul's Infirmary for Diseases of the Rectum, etc. New York: Wm. Wood & Co. 1882.

Dr. Kelsey's treatise on diseases of the rectum is the August number of Wood's Library, and will be found to constitute a very welcome addition to the whole series. The information contained in its pages is above all things practical in its character. The absence of all originality on the part of the author is compensated by his painstaking discrimination in regard to the recommendations of others. As a result, we have a treatise which differs very materially from such eminently personal works, as, for example, the manual of Allingham. While the latter is a treasury of vast personal experience, Kelsey's work is the result of diligent compilation, based on, comparatively speaking, but a limited amount of personal research. It is none the less valuable, however, on this account. In fact, it supplies more nearly the wants of the general practitioner in need of a competent and reliable guide-book for treating widely prevalent diseases, and it is in this sense that we can earnestly and cheerfully commend it to his perusal.

The International Encyclopædia of Surgery: A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by John Ashhurst, Jr., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-lithographs and Woodcuts. In six volumes. Vol. II. Royal 8vo, pp. 733. New York: Wm. Wood & Co. 1882.

The second volume of this great work is now before us. Its appearance has been looked forward to with keen interest, for the very excellence of the

first volume naturally suggested the query whether so high a standard could be maintained throughout the work. Judging by the volume just issued, this standard, if not excelled, has at least been equalled. And we could wish for no better earnest of the editor's intention to make the entire work the most comprehensive, the most reliable, and the most useful treatise on surgery in our language.

The first articles of the present volume treat of diseases, which, while in themselves local, may nevertheless be met with in any part of the body. Accordingly we find elaborate chapters on the different kinds of wounds, contusions, burns, abscesses, ulcers, and gangrenous affections. Of these the article on wounds from the pen of Thomas Bryant, of Guy's Hospital, is perhaps the most masterly, and in all respects satisfactory production.

The antiseptic method of treating wounds might have been dealt with at greater length in a work of such magnitude as the encyclopædia. For Listerism, though decidedly on the wane, must still be reckoned among the living issues of rational medicine. On the other hand, the various venereal diseases are considered with admirable thoroughness, the text being amply elucidated by beautifully executed colored plates. We know of no special textbook on venereal affections that contains fuller, clearer, and more practical descriptions of this common and important class of diseases than the present volume. Under the head of treatment we are pleased to observe, not a mere synopsis of the ephemeral recommendations found in current medical literature, but those time-tested and tried methods which result from the faithful investigations and matured experience of the best minds in the profession.

The closing articles of the volume are devoted to the discussion of the surgical diseases of the skin and its appendages, the diseases of the cellular tissues, and affections of the bursæ. These subjects mark the beginning of the special consideration of the diseases of the various tissues of the body, which is to be continued in future volumes.

In taking leave of the second volume of the encyclopædia, we may be permitted to indulge the hope that the forthcoming ones will not fall below their predecessors in point of general utility, interest, and importance. It is manifestly quite impossible that in a work resulting from the collaboration of so many minds, a uniform standard of excellence can be strictly maintained, or that certain repetitions shall not creep in. But within the natural limits thus prescribed, the editor and his associates have achieved all that is attainable, and certainly deserve the thanks and congratulations of the entire profession. The woodcuts and colored plates illustrating this volume are superior to those of the first one, an indication that the publishers are fully alive to the modern demands of the book-buying portion of our profession.

A Handbook on the Diseases of the Heart, and Their Homœopathic Treatment. By W. P. Armstrong, M.D. Chicago: Duncan Brothers. 1882.

As regards pathology, etiology, symptomatology, and diagnosis of cardial affections, this little treatise is a fairly well-written résumé of the subject. The treatment advised for these troublesome diseases is strictly in accordance with orthodox homœopathic doctrines, and will hardly be relied upon by those who hope to attain success in cardiac therapy. Digitalis in doses sufficient to produce decided effects does not, however, appear to be contraindicated by homœopathic dogma, and the homœopathic mind would seem to take kindly to prescriptions of "regular" doses of this powerful drug. We certainly have better works, and works in abundance on diseases of the heart, so that the present book is slightly *de trop* in medical literature. But as far as homœopathic writings go, it would seem to fill pleasantly a gap that has scarcely been perceived by the rational part of the profession.

Schema zur Forensischen Obduction. Mit in den Text eingedruckten Holzschnitten. R. Rehmann. (A Guide to Forensic Necropsies.) Braunschweig: Vieweg und Sohn. 1880.

This little pamphlet of eighteen pages will be found valuable by many as a practical guide for systematic post-mortems, especially those of medico-legal importance. The cuts are well done, and serve to illustrate points of interest in regard to the encephalon, the heart, and the fœtal circulation.

Grundriss der Anatomie des Menschen. Von Dr. J. Henle, Professor der Anatomie in Göttingen. Text, nebst einem Atlas von 286 Tafeln, zum Theil in Farbendruck. Braunschweig: Vieweg und Sohn. 1880. (Elements of Human Anatomy. By Dr. J. Henle, Professor of Anatomy at Göttingen.)

The above volume, a brief abstract of Dr. Henle's Anatomical Handbook, has been published in response to requests from various quarters, and is intended to accompany and explain the plates of his Atlas. The name of the author is a sufficient guaranty for the value of the book. It will be found especially useful by the student preparing for examination and the practitioner who wishes to rehearse knowledge with which he has ceased to be completely familiar.

A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M.D., Prof. Diseases of the Skin, University of Pennsylvania. Third edition, enlarged and revised. 8vo, pp. 685. Philadelphia: J. B. Lippincott & Co.

The last edition of this work has been noticed so recently that it is unnecessary at this time to repeat what we have said in a general way concerning its value as a thoroughly scientific and eminently practical text-book. Suffice it to say, however, that the present edition is considerably enlarged, that numerous and important additions have been made, more especially in the shape of new and valuable clinical material, while the therapeutical notes have been largely amplified from the personal experience of the author. The chapter on the anatomy and physiology of the skin has been rewritten.

Plica Polonica.—A report has been spread that the horrible disease known as the plica polonica has made its appearance in London, brought over by the traders in false hair from Poland. The disease is one of the most horrible kind, incurable, and rendering its victim an object as hideous to behold as the leper of the East. The hair, instead of dividing into fine and silky threads, conglomerates into thick matter, with only one thick root, which bleeds on being cut, so that no relief can be obtained save by cauterization of the whole mass. The report has caused a greater scare than any produced by the Fenians.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 13, 1882.

DR. E. C. SEGUIN, PRESIDENT, IN THE CHAIR.

ABSCESS OF THE LIVER IN A CHILD.

THE specimen was presented by DR. G. M. SWIFT, and was removed from a child two years and ten months old, at the New York Foundling Asylum. The nurse who had cared for the child since it was a year old said there had been nothing the matter with it until February last, when it had scarlet fever and diphtheria, from which diseases it made a fair recovery, and was in pretty good condition until about August 20th. At that time it was brought to the out-door department of the hospital, and was treated for acute entero-colitis, remaining under the care of this department until September 4th, when it was brought to the asylum in a state of collapse; the respiration was 32; the pulse was too small and frequent to be counted; an effusion was found in the right pleural cavity; the liver appeared to be enlarged, but it was thought this might be due to displacement from the pleuritic effusion. The child died within a few hours, and an autopsy was made on the morning of September 5th. On opening the abdominal cavity a large amount of serous fluid, containing fibrinous flocks, came away; the liver was enlarged, of a yellowish color, streaked with white spots, and at a portion near the diaphragm there had ruptured what proved to be an abscess, containing quite a large amount of pus. The abscess occupied nearly the entire right lobe. The liver was partly bound to the diaphragm. The spleen, also, was attached to the diaphragm. The right pleural cavity was about two-thirds full of sero-fibrinous pus. There were some adhesions between the lung and the pleura. The kidneys were pale, but normal. The pus from the abscess was laudable.

DR. C. HEITZMANN asked if the intestines were examined for the probable origin of the trouble.

DR. SWIFT replied they could not well be examined.

DR. DELAFIELD had not seen such a case in so young a subject, and he had found the record of but one like case, in which there was pyæmia and thrombosis of the liver.

DR. A. C. POST presented a specimen of

NECROSIS OF THE LOWER JAW,

which he removed from a patient about ten days before. The history was somewhat interesting with regard to the etiology of the disease. The patient was a man, about twenty-five years of age, who, about two years ago, had a bicuspid tooth extracted from the lower jaw. A considerable portion of the tooth, however, was left behind. About eighteen months afterward, in May last, he began to suffer from inflammation about the jaw, and not long afterward, an abscess having opened, these specimens of bone came away. After the removal of the remaining fragment of tooth the parts healed well.

Dr. Post also presented a specimen of

OMENTUM FROM A STRANGULATED HERNIA.

It was removed two weeks previously from a woman, a little under sixty years of age, who had had a tumor in the groin for a considerable period of time, but which had given no serious inconvenience until between two and three weeks ago. At that time the tumor became larger, painful and tender on pressure, and she vomited, the vomiting afterward assuming a stercoraceous character. She was unable to take any food, and the vomiting still continued when she entered the Presbyterian Hospital, on Wednesday evening of the same week. She looked pale and haggard, and ascertaining that the trouble was a strangulated hernia in the groin, Dr. Post urged an immediate operation, but consent could not be obtained until the next morning. It was a question whether the hernia was inguinal or femoral, but on cutting down upon it, it proved to be the latter. A small knuckle of intestine was shielded by omentum from the severe pressure to which it would otherwise have been subjected by the hard edge of the femoral ring. He was able to reduce the intestine without difficulty, for it had probably come down only recently, when the symptoms of strangulation first appeared. The omental hernia was cut away, the edges of the wound were brought carefully together after washing it with a carbolized lotion, and rather to his surprise the case had gone on well, with scarcely any bad symptom since. The temperature was very slightly elevated for two days after the operation; it rose a short time on the third day to 103° F., when probably there was a little intestinal irritation, but since that time the temperature had been almost normal, and the wound had healed mainly by first intention. The patient was having healthy movements from the bowel. There seemed to be some difference of opinion as to the expediency of removing the portion of omentum in these cases, but it was his practice always to do so when it was adherent, or much thickened, or had been in the sac long. With regard to the manner in which he secured the pedicle, he passed a cat-gut double suture, tied on both sides, then returned the stump, guarding effectually against hemorrhage.

THE HEALING PROCESS OF FRACTURED BONES.

DR. C. HEITZMANN said that ten years ago he made a number of experiments, in order to study the healing process of fractured bones, mainly on cats and dogs whose legs were broken, while they were under chloroform. Since then he had had a chance to examine the broken humeri of two children, thanks to the kindness of Dr. J. Lewis Smith, who supplied him with the specimens, one two weeks, the other four weeks after the injury, and found full coincidence with the specimens obtained from animals. All these fractures were complicated with a deviation of the broken ends of the bone, but not with an external injury. How the healing is going on, when the periosteum remains unbroken, is not as yet studied.

Immediately after the injury hemorrhage is present and blood fills the cavity between the broken ends. Beginning from the second day inflammation sets in, most intense in the tissues, which are most abundantly supplied with blood-vessels, *i.e.*, the periosteum and the muscles, while the injured bone shares in the inflammation, as a rule, only in a limited degree. The inflammation results in the formation of an embryonal or medullary tissue, which, toward the end of the second week after the fracture, leads to the formation of cartilaginous tissue, establishing the "provisional callus" of Dupuytren. The cartilage is in part hyaline and in part striated, holding plastids with coarse granules, compact

and shining, due to an active increase of the living matter. In the third week the cartilage tissue, in a number of foci, breaks down into medullary tissue again, which, owing to an active new formation of blood-corpuscles and blood-vessels, is freely vascularized. From this secondary medullary tissue at length arises bone-tissue, representing the "definitive callus" of Dupuytren. The newly formed bone-tissue is at first of the cancellous variety, therefore imperfect, while later, by repeated new formation of medullary tissue, the cancellous structure is replaced by regular compact bone. The healing, after months or years, is so perfect, that, were it not for the deviation of the fractured ends of the bone, no trace of the former injury would be visible.

He emphasized the fact that the healing process of fractured bones was identical in every respect with the normal process of formation of bone. Here, too, from the original embryonal or medullary tissue first cartilage arises, and in a certain stage of development the cartilage returns to the stage of medullary tissue, from which bone originates. No tissue is ever changed into another, unless by the formation of medullary tissue. For further particulars he referred to his book, "Microscopical Morphology."

In reply to a question by Dr. Wyeth, whether the cartilaginous formation developed from the embryonal tissue thrown out by the ruptured periosteum cells as well as that thrown out by the fractured bone-substance, he said it developed from all the embryonic tissue. Misunderstanding a question by Dr. A. R. Robinson, he denied the statement of some, that cartilage ever developed directly into bone. He claimed that there was always a preceding stage of juvenile and embryonic condition. Dr. Robinson, however, had asked whether the cartilage cells broke down and disappeared altogether, or whether they multiplied and returned to the previous embryonic condition. The latter was the answer.

REPORT OF THE MICROSCOPICAL COMMITTEE.

Dr. A. R. Robinson reported that the specimen of nasal polypus, presented at the last meeting in June, was an ordinary myxomatous tumor.

Dr. Wyeth presented a specimen of

ANEURISM OF THE RIGHT SUBCLAVIAN ARTERY.

In June last he presented a specimen removed from a patient who had an immense abscess, covering about a square foot surface on the back, due to necrosis of the last cervical and first two dorsal vertebræ. He knew not at the time what was the cause of the necrosis. Returning to the hospital yesterday, he found that the patient had died the day before from rupture of a small aneurism of the right subclavian artery, which had developed deep down under the first and second ribs. Doubtless the necrosis of the spinous processes of the vertebræ was secondary to necrosis of these ribs. The patient had been carefully examined by Dr. Wyeth, by the house staff, and by others of the visiting physicians, and there had not been the least suspicion or sign of an aneurism. There was solidification of the upper part of both lungs, as had been previously diagnosticated.

Dr. Post said he had had several cases of aneurism under his care in which no pulsation could be distinguished at certain periods, during which the existence of aneurism was doubted. The first case occurred many years ago in the New York Hospital. The patient had a large swelling in the inguinal region, and when he first came under his care he could distinguish pulsation. The tumor was flatter and less prominent than aneurismal tumors usually are, but pulsation was quite distinct. The case remained under observation for some time, and finally pulsation ceased altogether. It was submitted to a consultation of the surgeons of the hospital, and it was also examined by leading auscultators of the city and none could detect pulsation. Doubt was expressed as to the existence of aneurism. The patient suffered great pain, and the question was whether there was aneurism or deep-seated abscess. After consultation, he made an exploratory incision, cutting carefully layer after layer until he came to coagulated blood, when he ceased. Within twenty-four hours there was a gush of arterial blood and he cut down and tied the iliac artery. The patient died of peritonitis. Two other cases had occurred during the past summer. In one, the patient was a man, about sixty years of age, who had a tumor in the axilla, which he had noticed for a number of months, and which probably originated with an injury that had caused, it was supposed, fracture of the arm. There was a pulsating tumor, which could be emptied by pressure, on the subclavian artery. The pulsation ceased after a time, and, at a consultation, great doubt was expressed as to the existence of aneurism. The result of the consultation was unfavorable to tying the artery at that time. A few days afterward there was a copious hemorrhage. He then tied the artery just below the clavicle. There was extensive discoloration of the integument and tissues about the large axillary tumor, and a number of days after ligating the artery, the integument of the axilla sloughed. The patient would probably live, although he had lost much blood and had had a tedious time of it. The other case was due to an injury of the forearm, received six weeks before Dr. Post saw the patient. Hemorrhage at the time of the accident was controlled by pressure made by a physician. At the time Dr. Post saw the patient, the limb was very much swollen and hard, there was no pulsation, but the whole history pointed clearly to an injury of the ulnar artery, leading to a diffuse aneurism. He applied an Esmarch bandage, and cut down and exposed a cavity containing a large quantity of blood. He found the ulnar artery wounded, and tied it on either side of the wound.

Dr. H. J. Garrigues presented a specimen illustrative of

EXFOLIATIVE METRITIS.

The patient had diphtheritic ulcers of the vagina and of the uterus, which were treated by cauterization with chloride of zinc. For the ulcers in the vagina he used equal parts of chloride of zinc and distilled water; for the uterus an eight per cent. solution was injected, after first washing it out carefully with carbolized water. It was also washed out a second time after the injection of the chloride of zinc solution. She also had an offensive diarrhœa, from which she recovered under treatment. The vaginal ulcers healed almost completely, the offensive discharge from the womb ceased, but the organ remained very greatly enlarged, extending almost up to the umbilicus. From time to time the temperature would again run up, and on one of these occasions the uterus was again washed out with the carbolic solution, as had been done so often before with great benefit; but on this occasion she went into collapse and died in a few moments. At the autopsy, the uterus was found ruptured in two

places, anteriorly and posteriorly, the first rupture being three inches in length, the second less. At these points the walls had become as thin as a piece of paper, but the ulcers had healed perfectly. To the walls of the uterus were found adherent coils of the small intestine, and at two places there were fine canals leading into the intestine. More interesting still was a body, lying perfectly loose in the interior of the uterus, four inches long, two inches wide, and one inch thick. Microscopical examination showed that it was a part of the wall of the uterus which had been sloughed off by an ulcerative process which had burrowed beneath it. Muscular tissue of the womb could be distinctly seen, interspersed everywhere with inflammatory material. The condition should not be confounded with gangrene of the womb, an entirely different affection. As rare things tend to repeat themselves, so recently Dr. G—— had a similar case, the exfoliated part being a larger and longer piece of muscle. Evidently this body had acted as a valve, preventing the exit of the fluid during the injection, and had caused the rupture of the very thin uterine walls. This was a patient at Maternity Hospital. He had found the record of but two similar cases in the medical literature.

Dr. Heitzmann remarked that the muscular fibres were very plain, as the specimen had been perfectly preserved; and he asked whether this could be accounted for by attachment of the mass to the uterus at any point. Being informed that it was perfectly free within the uterine cavity, he asked Dr. Garrigues how long he supposed it had been detached.

Dr. Garrigues replied that the whole time from the commencement of the diphtheritic attack unto her death was two weeks.

Dr. Wyeth then suggested that the frequent injections of the disinfectant fluid might account for the high state of preservation of the specimen.

Dr. R. W. Amidon presented a specimen of

URINE, CONTAINING HIPPURIC ACID.

The patient was a gentleman, forty-three years of age, who up to about four years ago enjoyed almost perfect health. At that time he was very much troubled in business matters, and began to suffer from very persistent, almost continuous frontal headache. The summer following, his appetite became almost ravenous. Gratifying the appetite relieved the headache to a considerable extent, and that was about the only thing which would relieve it. In July, 1881, his appetite became still more ravenous, and was followed by gastric catarrh, from which, however, he recovered. He noticed, last fall, that using his eyes made the headache much worse, and several oculists were consulted. He was told by some physicians that he was suffering from phosphoruria, but Dr. Amidon did not find any phosphates in the several specimens of the urine which he examined until after it had been kept a very long time. The urine was alkaline, as was the specimen presented, but this was very little ammoniacal, notwithstanding it had been kept for some time. Nearly all the specimens which he had examined presented another not very common feature, namely, the presence of hippuric acid. The crystals were commonly in the form of rhomboidal prisms, though the ends were in some instances chisel-shape. They were very apt to collect in rosettes; they were not soluble in weak acid nor at all so in hydrochloric acid. He was much surprised in looking over the literature to find what various terms were applied to these crystals. It had been found that the quantity of hippuric acid in the human urine is increased by the ingestion of certain articles, as huckleberries, mulberries, benzoic acid, etc.

Dr. Amidon also presented a specimen of

SPERMATIC FLUID,

obtained from an unmarried male patient, forty years of age, who was subject to nocturnal emissions for a number of years. During the past five or six months, however, he had had none. He denied venereal excess, masturbation, or venereal disease. He had used alcohol in excess in his youth. During the past five or six years he had been having an emission, after stools particularly, and unaccompanied by an erection or sexual feeling. In this condition he came to Dr. Amidon, who told him at once that he had simple prostatorrhœa. He was surprised, however, subsequently, on examining some of the ejaculated fluid, to find that it contained spermatozoa. These were uniformly present. He improved under treatment by ergot, belladonna, and atropine, and at present sometimes passes over two weeks without an emission.

Dr. Heitzmann said the specimen and drawing presented by Dr. Amidon did not represent hippuric acid crystals, but simply phosphate of lime. Hippuric acid appears in the form of needles, and is very rare. He had seen it in but one case out of the hundreds which he had examined. Moreover, as the name indicates, urine containing hippuric acid should be acid, while the specimen presented was alkaline.

Dr. Amidon said the specimen presented could not be very alkaline, since, after long keeping, it had scarcely any ammoniacal odor, and it contained oxalate of lime. It was true certain authors agreed with Dr. Heitzmann's description of the hippuric acid crystal, but Dr. Amidon agreed with the very high authorities whose description of it corresponded with that of the specimen presented.

Dr. Wyeth remarked that a similar illustration would be seen in Flint's "Physiology."

The President remarked that the physicians who had examined this patient's urine, and had found phosphoruria, had, as was quite commonly the case, examined only one specimen from one period of twenty-four hours—after a mid-day or afternoon specimen.

With regard to the second case, Dr. Heitzmann had seen one instance in which a man had an emission just before micturition, and a number of surgeons here and abroad were unable to reach a diagnosis. On examining some of the fluid he found that it contained spermatozoa of a very peculiar shape. He found pus corpuscles with long cilia, resembling the tails of spermatozoa, as if the latter had migrated into the former, and the only admissible diagnosis seemed to be inflammation of the seminal vesicles. He asked whether Dr. Amidon had noticed any such peculiarity about the spermatozoa in this case.

Dr. Amidon replied that he found very few perfectly normal ones; there were many curled up, many with large heads, and many small ones.

Dr. Heitzmann then confirmed this statement on examining some of the fluid, and was of the opinion that the case was similar to the one just mentioned.

The President remarked that he had examined the fluid in cases of occasional involuntary emissions in a number of instances, and had generally found

spermatozoa, and had supposed it was of no pathological significance, but due to an overflow of the vesiculæ seminales. The case would probably be different, however, if the emission took place quite frequently.

Dr. Wyeth remarked that in some of these cases there was enlargement of the vesiculæ seminales, as had been illustrated by specimens presented to this Society, and the emission might sometimes be due to pressure of the distended rectum upon the enlarged vesicles.

Dr. William T. Belfield, present by invitation, showed some microscopical preparations of

BACILLI,

and made some remarks on the views entertained at the present time concerning their relation to different diseases, etc. As bearing on the possibility of diagnosing tuberculosis by the presence of these minute organisms in the sputa, the sputa of twenty-two different patients were submitted to himself and another gentleman for examination, without their knowledge of the history of the patients. They found the tubercle bacilli in all the specimens, less marked in two, and made a diagnosis of tuberculosis. This diagnosis had been verified by the physician of the hospital by physical examination in twenty of the cases, but in the last two mentioned the diagnosis was simply of bronchitis. Sufficient time had not elapsed to be able to determine whether in these two cases there might not have been commencing tuberculosis without sufficient signs to be recognized by physical examination.

A vote of thanks was offered Dr. Belfield for his interesting demonstration, after which the Society adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, September 25, 1882.

Dr. F. R. Sturgis, President, in the Chair.

Dr. W. F. Mittendorf read a paper on

MYOPIA AND THE NECESSITY OF ITS CORRECTION WITH GLASSES.

Myopia had justly been called a disease of civilization, and unless prompt measures were taken to check the injurious influences which led to its development, its spread must necessarily increase. Appreciating the importance of the subject, hundreds of the most competent observers had of late occupied themselves with its consideration, and it was only a few years ago that one of the ablest of them, Dr. E. G. Loring, presented to this Society the results of his labors in this field of scientific inquiry. Dr. Loring, however, confined himself especially to the causation of myopia, whereas the object of the present paper was to point out the necessity of preventing the progress of the disease by prompt attention and early use of glasses. Myopia had but little history, and it was only after the measurements of myopic eyes by Prof. Arlt in Vienna, in 1854, that we had had anatomical proof of its existence. It was really only after the invention of the ophthalmoscope that the scientific study of the subject became possible. It depended upon elongation of the eyeball, and certain anatomical points were then illustrated.

With reference to causes, it was, as a rule, an acquired condition, and one impossible to cure. It could, possibly, be prevented; but once established, we can only watch and see that it does not increase, and, above all, that the patient does not lose any power of vision. Do some eyes have a greater tendency to acquire myopia than others? Undoubtedly. Under this head two factors were considered: (1) heredity, and (2) debility or resistance of the sclera. The importance of heredity was illustrated by statistics obtained as the result of observations made by Dr. R. H. Derby and himself, and it became apparent that myopia occurred more frequently among Hebrew and German children than among American and English. The second or lack of resistance in the sclera was, perhaps, one of the most frequent and dangerous of all causes, and it was apt to last during the lifetime of some persons, and led to those cases of high degree of myopia too frequently followed by loss of sight. This condition might follow the debilitating diseases of childhood, and if other causes were brought into play, such as reading or close application of the eyes shortly after having measles, scarlatina, diphtheria, etc., it was a not infrequent result. An illustrative case was cited.

Another cause was some defect of the eyes, on account of which greater efforts than usual were necessary during the act of vision, especially for near objects. Irregular curvature of the cornea might be a cause, and an illustrative case was given. Other causes were mentioned, but the most frequent was use of the eyes in childhood with small and near objects.

The effects which errors of refraction would produce upon the mind of a child had already been pointed out by many observers, and also the beneficial influence of glasses in such cases. But, important as it was, it was not the greatest danger of myopia. It was the change in the interior of the eye caused by the nature of the trouble, the stretching of the more delicate inner structures of the eyeball, that was especially to be feared. It should be the chief object of the physician, when he met with cases of myopia, to prevent its increase. The author of the paper then explained how the changes were brought about, alluded to the most dangerous period in life for the development, and also for the approach, of the more serious complications of this affection.

In order that the eyeball may undergo change, the sclera must be soft and yielding, and that favorable condition existed when the child was growing, and especially so if there was a hereditary tendency to weakness of the sclera, or if the tonicity of the coats of the eye had been reduced by some general condition.

Another dangerous period was when the lens became harder and less elastic. The changes which take place in the inner structures of the eye were then pointed out, and special reference made to the changes occurring in the ciliary muscle. These were regarded as the most important. The histories of several cases of myopia which had been prevented by the early use of glasses from increasing, and with preservation of vision, were then related, and others in which it had been uncorrected, and terminated in loss of vision.

Dr. Mittendorf then referred to cases known as false myopia or spasm of accommodation, where the trouble did not depend upon the change in the eyeball, but upon disturbances of refraction caused by a spasm of the circular fibres of the ciliary muscles,

whereby the curvature of the lens was increased. With regard to prevention of myopia, the dangers to be guarded against were (1), the condition of the sclera, (2) avoidance of compression of the eyeball by the external ocular muscles, and (3) avoidance of intra-ocular pressure, namely: intense and long-continued accommodative efforts and fulness of the intra-ocular blood-vessels. Between the ages of five and sixteen, the eyes should especially be protected against strain, such as comes from too close application at school, overwork with the eyes after debilitating disease, and most especially if there was a hereditary tendency to the affection. The compression of the external ocular muscles was only to be feared when the child was occupied with small objects near at hand which demanded constant convergence. Reading and writing should not be continued for long periods at a time. The avoidance of intra-ocular pressure was to be secured, as much as possible, by avoiding tight clothing about the neck, the stooping position for long periods, studying before breakfast, etc., and the observance of general hygienic measures.

All these measures were not only to prevent the development, but to arrest increase after development had taken place. But there came a time, perhaps, when the eyes were irritable, and absolute rest with local treatment might be required. After the symptoms of irritation had disappeared, the amount of existing myopia should be ascertained by means of test-glasses and the ophthalmoscope, and glasses adjusted to meet the requirements in each case.

Dr. David Webster being called upon to open the discussion, said that owing to the lateness of the hour and the completeness of Dr. Mittendorf's paper, he had nothing to add, and gave his adherence to views which the author had expressed.

Dr. O. D. Pomeroy remarked that there remained but little to be said, yet there were a few points which, perhaps, might be worthy of mention. He had not been in the habit of giving myopic patients glasses for distance early to be worn constantly. He thought that the essence of myopic causation existed in tension of the ciliary muscle. A large number of cases of detachment of the retina depended upon myopia, and a high degree of myopia was a very serious condition. Among the causes not mentioned was the avoidance of glasses at the presbyopic age.

The Society nominated the officers for the ensuing year.

The President directed attention to the by-law, stating that members in arrear of dues were ineligible to hold office or to vote, and Dr. Jacobi urged that only those should be elected delegates to the State Medical Society who would make it a special duty to attend its annual meetings.

The Society then adjourned.

A Fashionable Panacea.—As an illustration of the value of the statement that "a good proportion of intelligent people employ homœopathic physicians," is the following: Dr. Forbes visited Paris in 1842 and learned that with the *élite* of the city a certain nostrum was held to possess astounding virtues. By means of some money he bought the formula for this wonderful nostrum, and found that it consisted "of a decoction of flint stones."—*Detroit Lancet.*

FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Eleventh Annual Session, held at La Rochelle, August 24, 25, 26, 1882.

M. Azam, of Bordeaux, President, in the Chair.

SECTION IN MEDICINE.

Over sixty physicians from different parts of France were present. M. Verneuil was made President-elect.

M. Tricout, of Rheims, opened the scientific work with an exhibition of some ingenious apparatus invented by him. It consisted of an ivory pessary to be held in place by bands running between the thighs, and so arranged as to adopt itself to every position of the body. He also showed a new form of suspensory bandage for the testicles, and an irrigator.

M. de Musgrave-Clay related an interesting case of

SUPPURATIVE ARTHRITIS OF THE ELBOW TREATED WITH ERGOT

internally, and temporary immobilization. The arthritis was in full suppuration when the patient, a child aged six years, came under treatment. He was put upon drachm doses of fluid extract of ergot. There was a rapid diminution of pain, of inflammation, and of pus. The dose was increased to nearly two drachms (75 centigrammes), when the patient's feet began to get cold. Suppuration had ceased, and the dose was gradually diminished. The cure was nearly perfect, there being only a slight interference with movement. This method of treatment was conceived and had previously been employed by M. Daboué, of Pau.

M. Maunay read a paper upon the treatment of the

VOMITING OF PREGNANCY

by cauterizing the neck of the womb. He related thirteen cases in which this operation had been successful in stopping the vomiting. In one case it had been a failure.

In the debate the dangers of so heroic a method of treatment were referred to, and the inhalation of oxygen was suggested, as recommended by Pinard, in cases which resist all other treatment. M. Henrot argued that some cases of vomiting were due to flexions or displacement, and that here a restoration to the normal position must be attempted before anything else is done.

M. Boucheron gave an account of his further researches into the cause of deafness. His view was that deafness in most cases is caused by a closure of the Eustachian tube; the air in the middle ear is then absorbed, which causes pressure from outside, interference with transmission of sound, and finally paralysis and atrophy of auditory nerve-filaments by compression.

In support of this view M. Boucheron told of a dog, deaf-mute from birth, which at the fifteenth month was killed and the ear opened under water. No air was present in the middle ear. The auditory nerve-filaments were atrophied. M. Boucheron compared deafness by otopiesis or compression of the internal ear to blindness from glaucoma, in both there being nerve-atrophy from compression.

M. Paul Laudowski read a paper upon "Morphinism and Morphiomania in France." He showed that there had been an increase in morphine-taking

of late years, also that there had been sudden increases after the war with Austria in 1866, and after the Franco-Prussian war in 1871. He employed the "extrait thebaïque" in treatment.

M. VERNEUIL said that persons with cancer were often morphine-takers, and were on that account more likely to be seriously affected by anæsthetics.

M. DRANSART offered a new theory as to the cause of

NYSTAGMUS IN MINERS.

It was that the trouble is due to fatigue of the elevator-muscles of the eye, produced by constantly looking upward, as miners are obliged to do. The theory, he claimed, was confirmed by physiological experiments. According to M. Dransart, anæmia is no more common in miners than in other laboring classes.

M. LENDET, of Rouen, read a paper upon

ALCOHOLIC GASTRO-ENTERITIS.

His conclusions were:

First.—The lesions of the alimentary tract due to the use of alcohol are generally present in stomach and intestine, but they may be more localized.

Second.—The quality of alcohol consumed contributes less than the mode and amount in which it is taken to determine the resulting form of disease.

Third.—They present different forms in different classes of society.

In the better classes alcohol is taken, perhaps, oftener, but in smaller quantities. Among laboring men alcohol is taken in large doses at rarer intervals.

Fourth.—In the better classes the form of gastro-enteritis is the catarrhal, and it is mild and chronic.

In the workmen it is often an acute, subacute, or chronic gastro-enteritis.

Fifth. — Nervous and mental troubles result equally in both classes.

Sixth.—Hepatitis and vascular troubles are relatively more frequent, but more chronic in the better classes.

M. VERNEUIL reported a case of luxation, with double fracture of the humerus.

M. ROUSSEL, of Geneva, read a paper upon

TRANSFUSION OF BLOOD.

According to him the chill which results after transfusion is an index of the reaction of the system, and is a favorable symptom. He injects sometimes as much as 300 grammes (℥ x.) of blood. The urine he considers to be the criterion of the quality of the injection, it being bad if there is albuminuria or hæmaturia. In acute anæmia, produced by a single excessive hemorrhage, transfusion is not necessary. It is indicated in anæmia produced by repeated hemorrhages.

M. VERNEUIL thought that transfusion of blood was a process at once difficult, dangerous, and useless. He recommended subcutaneous injections of ether as being equally efficient and far more safe and convenient. He admitted the success of transfusion in some cases, but did not think it due to the blood.

M. HENROT thought that transfusion was indicated in certain cases, and that it was better to use the natural stimulant, blood. He had employed transfusion considerably before he learned the value of ether and ergotine. Of late years these latter agents had entirely supplanted transfusion in his practice.

The session concluded with a paper by M. VERGER upon scorbutus in an infant of seven months. The disease is very rare at that age.

(To be continued.)

Correspondence.

BRONCHITIS AND INTERPLEURAL PLASTIC EXUDATION.[1]

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Teachers of physical diagnosis have told medical students, year after year, from Laennec's time to our day, and with scarcely a dissenting voice, that moist râles, when heard within the thoracic cavity during the respiratory acts, meant that mucus, blood, or serum was contained in the bronchial tubes. Further, they have forcibly inculcated that the character of the râles must vary in accordance with the relative fluidity of the exudation and the size of the bronchi in which air was inspired or exhaled. Within the pleura, when inflamed and its opposing surfaces rubbed together, were recognized friction sounds of different tonality and intensity. Sometimes, although rarely, these latter can be distinguished by the ear with considerable difficulty from abnormal sounds of the lung itself. Certain differential signs, happily, are given by most classical authors, to separate them more or less accurately. Thus, the fact that the interpleural râles are more superficial, more limited, less variable during successive respirations, or after a paroxysm of cough, differentiates them often in a sufficient manner. The locality in which they are heard is, also, at times of value in fixing their identity. Inasmuch, too, as the situation in the respiratory tract, where certain moist râles are produced, has been demonstrated experimentally, there would seem to be no good reason to doubt accepted belief unless morbid anatomy should show error of interpretation. This, in my estimation, it has not hitherto done. To support this affirmation, I have but to cite the very numerous cases of pulmonary œdema or congestion, with or without accompanying bronchitis, in which no inflammatory condition of the pleura is visible at the autopsy, and where, during life, the presence of generalized moist râles was undoubted. The preceding statements are simply intended to direct attention to the validity of what have long been recognized as established facts, and *not* to allow a plausible but, in my opinion, incorrect belief to gain vantage ground unchallenged.

Respectfully yours,
BEVERLEY ROBINSON, M.D.

NEW YORK, October 1, 1882.

COUNTY DELEGATES AND THE NEW YORK CODE.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: The *Medical Gazette* of August 26, 1882, contains an editorial which, though that journal was amongst those regularly received and read by me during my absence from the city, I happened to overlook, and to which my attention was drawn but a few days ago. It reads as follows:

"A TIMELY BUT MYSTERIOUS WARNING.

"A writer for one of our city contemporaries, who intimates that he is one of the 'stalwarts' who voted to lower the flag, but who conceals his name,

[1] Vide article with this title by D. M. Cammann, M.D., in THE MEDICAL RECORD of September 30, 1882.

says to the editor, 'I want you to warn the county societies of our State not to allow themselves to be propelled into undue action.' The suggestion is cool, elegant, and classical. They are to be 'warned' not to permit of the application of any *vis a tergo*, which shall propel them into undue action. But seriously, what boots it whether the impulse comes from behind or from before? In either case it might result in undue action. Violent attraction would seem as dangerous to the morals of the society as violent propulsion.

"This is, however, a nice metaphysical question, in the discussion of which we confess to a little mental confusion; and we suspect our readers will also. Perhaps the author will explain his meaning more fully; and it is hoped he will do it over his own signature, in order that his suggestions or warnings may have additional weight.

"We notice that the editor, in parenthesis, at the close of the correspondent's letter says, that he understands it and it is all right, and 'eminently sound.' Probably we ought to accept of this as a sufficient explanation."

As the writer of the above editorial chooses to remain anonymous, he ought not to blame his supposed adversary for corresponding without "his own signature." Moreover, it appears to me that the readers of the *Gazette* are entitled to all the mental confusion which is claimed for them. For the editorial does not state to which of the "city contemporaries" it refers, nor to which article or subject, nor when the publication alluded to made its appearance. The purchasers and readers of the *Gazette*—I am one of the many—may feel proud at its editor—their editor—"going for" somebody because of some blunder or shortcoming committed somewhere at some time or other, but there are certainly a great many who would be very much more pleased to learn what the editor is just castigating, what the incriminated article was, and on what subject, and where printed, and when. Without some definite explanations of that kind, the 'metaphysical questions" of "boots," "impulses from behind or before," "violent attractions," etc., will be almost as unintelligible to most of them as they have been to me.

As the readers of the *Gazette*, if there be any who do not read THE MEDICAL RECORD, cannot know what the above editorial alludes to, I shall say, if I am to judge by the quotation contained in the introduction, that it refers to a letter printed in THE MEDICAL RECORD of August 12th.

If I had been vain enough, Mr. Editor, to believe that by my signing the letter my suggestions or warnings might have "additional weight," I should not have authorized you either to print or withhold my name as you deemed proper. But, really, what I had to say appeared to me so simple and intelligible that the personal influence of any writer on the subject could amount to nothing, no matter who he was.

Now, as the *Gazette's* editorial claims not to have understood me, I shall repeat my meaning in a very few words:

First.—The abrogation of the Code of Ethics was a surprise to nobody. It was the subject of deliberation, through the course of a year, of a committee of five of the best known medical men of the State of New York, who had been appointed for that purpose.

Second.—It was generally understood that final action on the question would be taken in the session of 1882, and it *was* taken in a special meeting held on the second day of the proceedings.

Third.—The abrogation of the code was not the work of some specialists, hungry for consultations and greedy for more money.

Fourth.—That imputation ought never to be made by those who claim an honorable position in medical literature. The tone of their remarks resembles the questionable tactics of some ward primaries more than it does the decorous discussions of scientific publications.

Fifth.—It is a grave mistake on the part of some County Medical Societies to tie the hands of their delegates, and to force them to vote one way or the other. That is what they have done when they instructed their delegates for 1883 to vote for reversing the action of the meeting of 1882, no matter what they might hear and learn in the discussions proposed for the next meeting.

Sixth.—The only dignified action on the part of the County Societies is to send their delegates with *but one binding instruction, viz.: To attend the meeting in February next; to hear, and to speak, and then to vote according to their convictions, such as they will be after the several opinions and reasons will have been exchanged.*

That is all, Mr. Editor, I desired you to impress upon your readers when I sent you my note of August 12th, and if you permit me, I dare to express my firm belief that neither the *Medical Gazette* nor any other respectable journal will insist upon anything better than this, that in all *things concerning the profession of the State the voices of the profession shall be heard first in a stated meeting, and a fair discussion, and the votes counted afterward.* Calling their opponents hard names, accusing them of low motives, packing a jury of delegates, instructed beforehand that they must not allow themselves to be instructed, is unworthy of the profession of a country whose first principle is that of free speech and unbiassed discussion. I feel that those delegates who have accepted their offices for the next meeting of the State Society with the understanding that they must vote as they are directed by their absent friends half a year in advance of the discussion of the question to be voted upon, have permitted themselves to be lowered into a very unenviable and undignified position, and I trust that unless the County Societies rescind their own "instructions," the delegates will refuse to submit to their moral and intellectual servitude, and resign their humiliating offices.

Very respectfully,

A. JACOBI, M.D.

NEW YORK, September 29, 1882.

[There will be few of our readers who will not agree with our correspondent in believing that it is a grave mistake for a County Society to force its delegates to vote one way or another on any question before it is fairly discussed and before the different pros and cons are presented. We can hardly believe that any of the County Societies seriously intend to do this, or that any of the delegates named will so far forego their personal rights as to submit to such dictation. Each delegate has a right to free thought, free speech, free opinion, and free voting. Unless this much is conceded, an impartial and just decision can never be reached on any question.—ED.]

THE LAYMEN AND THE PROFESSIONS.—The common lay mind hates the lawyer, as the lay body objects to the doctor, and the soul is timorous of the parson.—*Blackmore.*

New Instruments.

AN IMPROVED WHALEBONE INSTRUMENT FOR TREATING TIGHT STRICTURES OF THE URETHRA.

By E. A. BANKS, M.D.,

SURGEON TO THE CLASS OF MALE GENITO-URINARY DISEASES AT THE BELLEVUE HOSPITAL OUT-DOOR DEPARTMENT.

Tight organic strictures, complicated at times with complete retention of urine, or engorged bladder with dribbling of urine, are of common occurrence, and likely to be met with in the practice of every one. The urgency, and at times the absolute necessity for the early relief of this trouble renders the means of its relief a matter of interest and importance. At the present time the most approved methods are the introduction of a whalebone bougie as a guide, and the passage over it of a tunnelled sound, or the use of a small, flexible, gum bougie screwed on to a steel shaft. Of these the former seems the best.

The combination of the whalebone filiform with the tunnelled sound forms an excellent instrument for the dilatation of most close strictures, but not for all. Now and then an old, tight, fibrous stricture will be met, possibly with eccentric orifice, or tortuous course, that offers such positive resistance to the above means as to render some other desirable. This desideratum, we believe, will be supplied by the present instrument.

The two accompanying cuts are intended as a comparative representation of two sides of the instrument, the right hand one showing a flattening of its conical portion that connects the point with the body. This flattening is of material advantage in its construction, as it enables us to limit the conical portion within a small space, and at the same time to obtain a necessary flexibility for passing the curved urethra. We are thus enabled to retain a long, fine point for easy passage of the stricture and harmless entrance into the bladder, and a body of material size for dilatation of the stricture. The proportions of the instrument I have used are: the point about four inches long, the flattened, conical part about two, and the body seven inches in length; the size, No. 7 of the American scale.

The instrument was devised to meet the needs of a case of a patient with an old fibrous stricture, who had previously undergone urethrotomy, but his stricture being neglected, had recontracted, and was very close. An attempt was made to pass a tunnelled sound over a whalebone filiform, but was met with such resistance that after a judicious trial with manipulation and force, I concluded to cease the effort and seek some easier means of meeting the difficulty. With this instrument the difficulty was overcome with ease and satisfaction, and we believe it will be found very useful in the treatment of all tight strictures.

New Marine Hospitals.—A site has been purchased for a new U. S. Marine Hospital at New Orleans, costing $35,000. New marine hospitals are also to be erected at Cincinnati, O., and at Cairo, Ill.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 23, 1882, *to September* 30, 1882.

Smith, Andrew K., Major and Surgeon. Leave of absence on Surgeon's certificate of disability, granted in Special Orders No. 131, August 22, 1882. Department of Arizona, extended two months, on Surgeon's certificate of disability. S. O. 214, A. G. O., September 14, 1882.

Bushnell, G. E., First Lieutenant, Assistant Surgeon. Granted leave of absence for one month. S. O. 147, Department of Dakota, September 7, 1882.

Spencer, William G., Captain and Assistant Surgeon. Granted leave of absence for four months, on Surgeon's certificate of disability. S. O. 219, A. G. O., September 20, 1882.

Hopkins, W. E., Assistant Surgeon. Relieved from further duty at Camp Washington, Gaithersburg, Md., and will proceed to Fort Adams, R. I., and resume his duties at that post. S. O. 168, Department of the East, September 22, 1882.

Powell, J. L., Assistant Surgeon. To report at Headquarters, Department of Texas, to temporarily relieve Assistant Surgeon P. Middleton as Post Surgeon and Attending Surgeon at Department Headquarters. S. O. 103, Department of Texas, September 20, 1882.

Carter, W. F., Assistant Surgeon. Relieved from duty at Fort Concho, Tex., to report to commanding Officer, Fort Stockton, Tex., for temporary duty as Post Surgeon. S. O. 103, Department of Texas, September 20, 1882.

Middleton, P., Assistant Surgeon. Granted leave of absence for one month, on Surgeon's certificate of disability, with permission to go beyond limits of the Department. S. O. 103, Department of Texas, September 20, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 30, 1882.

Week Ending	Typhus Fever.	Typhoid Fever	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 23, 1882.	1	26	29	5	7	28	1	0
Sept. 30, 1882.	0	25	7	7	2	24	1	0

The New Seney Hospital in Brooklyn.—The corner-stone of the new Seney Methodist Episcopal Hospital was laid with appropriate ceremonies last week at Seventh Street and Seventh Avenue, Brooklyn. The hospital is the gift of George I. Seney, who also gave the lots on which it is to be erected. It owes its origin to an editorial, the substance of which was that Methodists should be more charitable, and should build hospitals and asylums of their own. During the next month after the publication of the editorial, a letter was received from George I. Seney, donating sixteen lots, valued at $40,000, for the site of the hospital, and also making

a cash gift of $100,000. A few days afterward this sum was doubled. The hospital, Dr. Buckley said, would be open to all—Christian or infidel, rich or poor. An address was then delivered by Dr. L. S. Pilcher, of the Building Committee, who spoke of the evils of hospitals. The hospital is to be built with isolated wards, and every possible device to secure pure air. It will accommodate two hundred patients.

THE MEDICAL COURSE FOR WOMEN at St. Petersburg, in connection with the Military Hospital, has been stopped, by order of the government.

THE MEDICO-LEGAL SOCIETY held its first fall meeting at Mott Hall on Wednesday, September 27th. A paper, which will be published in a future number of THE RECORD, was read by Dr. Graeme M. Hammond on "Death by Hanging."

After the discussion of the paper, the Society spent the time until one A.M., in a most edifying wrangle over the minutes of the ex-Secretary and the action of the Treasurer, Dr. E. C. Harwood. That gentleman had refused to pay a bill of $250 for printing, basing his refusal on a set of minutes signed by the then Secretary. The bill, however, had been endorsed by the Trustees and Finance Committee; it was shown also, that the minutes of the secretary were incorrect. The Treasurer was, therefore, instructed to pay the bill. The conduct of the Society was not in harmony with the simplicity of its conclusions. For four hours the bust of the venerable Mott looked down upon a choppy sea of waving hands and vehement expostulations. The atmosphere is reported clear now, however, and the society under the active (if, at times, too active) management of its able President will settle down to scientific labors alone.

AN ANTI-VACCINATION SOCIETY has been formed at Hartford, Conn. About a dozen persons constitute the organizing membership.

ERRATUM.—On page 361 of THE MEDICAL RECORD for September 23, 1882, in the item on "Lead Colic," the dose of extract of belladonna is given as "five centigrammes," which is correct, "or, gr. viijss.," which is manifestly an error. Five centigrammes is a little less than one grain.

ON IMPERFECT NUTRITION OF INFANTS.—The name of the author of "Imperfect Nutrition of Infants" (MEDICAL RECORD, September 16, 1882) should be Dr. E. M. Hermance, instead of Dr. E. M. Hermann, as printed.

WARNING AGAINST TYPHUS.—The following circular has been issued by the State Board of Health of New York: "The typhus contagion which is being spread by railway laborers, threatens much harm. The local boards of health in the three hundred and twenty-six villages and the nine hundred and forty-seven towns and twenty-four cities of the State, should require their health officers to be watchful and ready to adopt all necessary sanitary precautions for isolating and controlling this disease at its first appearance. Tramps should not be permitted to enter dwellings and lodging-houses as they wander about. They should be cleansed and controlled by Superintendents of the Poor. Sanitary officers should order whatever is necessary. Every typhus patient should be so quarantined and provided for as to prevent the spread of infection. All lodging-houses and dwellings where fever is suspected should be thoroughly cleansed; and wherever a case of typhus occurs the disinfection of the clothing, bedding, and sick rooms should be as prompt and thorough as in cases of small-pox. The sick and whatever pertains to them, as well as the remains of the dead from contagious diseases, must not be removed from one place to another without written permission of all the health boards of the several places.

THE YELLOW FEVER EPIDEMIC.—The following is a summary of the progress of yellow fever at Brownsville for the week ending September 30, 1882, compiled from the official returns in the U. S. Marine Hospital office:

Date.	*Cases.*	*Deaths.*	*Date.*	*Cases.*	*Deaths.*
September 24.....	2	0	September 28.....	11	2
September 25.....	5	1	September 29.....	3	1
September 26.....	5	0	September 30.....	4	0
September 27.....	0	0			
Total.....				30	4
Previously reported.....				1,870	103
Total during epidemic.....				1,900	107

On October 1st, there were 3 new cases and 1 death; October 2d no new cases were reported. There are about 100 sick in all within the sanitary cordon, including Brownsville and Matamoras. Since the decline of the fever there have been great efforts to break the sanitary cordon on the part of some of the merchants. The cost of the Sanitary Hospital work in the past two months has been $28,000.

An official report from Pensacola, Fla., by mail, has been received by the Surgeon-General, to include September 29, as follows:

Date.	*Cases.*	*Deaths.*	*Date.*	*Cases.*	*Deaths.*
September 22.....	43	2	September 26.....	60	2
September 23.....	36	5	September 27.....	60	6
September 24.....	39	5	September 28.....	36	2
September 25.....	55	2	September 29.....	52	11
Total.....				381	35
Previously reported.....				344	41
Total during epidemic.....				725	76

On October 1st there were 45 cases, 4 deaths; October 2d, 45 cases; 5 deaths. The Board of Health at Pensacola employs 120 nurses in addition to several Sisters of Mercy. Business is entirely suspended.

THE TRI-STATE MEDICAL SOCIETY of Indiana, Illinois, and Kentucky, closed a very successful annual meeting at Terre Haute, Ind., on September 28th. The following officers were elected for the ensuing year: *President*—Dr. William Porter, of St. Louis; *Vice-Presidents*—Dr. Jos. Eastman, of Indianapolis, Dr. James Letcher, of Henderson, Ky., and Dr. Chambers, of Charleston, Ill.; *Secretary*—Dr. Burton, of Mitchell, Ind.; *Treasurer*—Dr. F. W. Beard, of Vincennes, Ind. The society adjourned to meet at Indianapolis on the third Tuesday in September, 1883.

THE DEATH OF DR. WILLIAM PIERSON took place at his residence in Orange, N. J., on October 1st. Dr. Pierson was one of the oldest and most esteemed physicians in New Jersey. He was born in 1796. He belonged to a family of physicians, comprising his grandfather, Matthias Pierson; his father, the Hon. Isaac Pierson, for some years a member of Congress; himself, and his son, William Pierson, Jr., all of Orange. He was for thirty years the Secretary of the New Jersey Medical Society, and afterward its President. During his long life he was prominent in public matters as well as in his profession, having been a member of the New Jersey Legislature between 1835 and 1840, and from 1849 to 1852 sheriff of Essex County.

Original Lectures.

ON THE TREATMENT OF DIPHTHERIA.[1]

By PROFESSOR DUGARDIN BEAUMETZ,

PARIS, FRANCE.

Part II.

We have in this group (*i.e.*, those that locally modify through selective elimination) to study three medicaments—chlorate of potassium, copaiba, and pilocarpine. Chlorate of potassium is a remedy which has been and is now very much employed in the treatment of diphtheria. Barthez, Isambert, and many others have considered chlorate of potassium a medicine without a rival in the treatment of membranous angina, and quite recently Seeligmuller has maintained that if the chlorate be rightly and methodically administered, it will with certainty cure every case of diphtheria.[2]

Without denying that chlorate of potassium does have a very favorable action on the mucous membranes of the pharynx and larynx, without denying the solvent action of this medicament and its power as a local alterative, it must nevertheless be borne in mind that this salt has no specific virtue in the treatment of diphtheria. At the same time, of all the local modifiers it is one of the best, and I cannot too highly recommend it for both local and internal use; being eliminated by the buccal and pharyngeal mucous membranes, its utility as a local alterative does not end with its ingestion.

Meanwhile I ought to call your attention to two points; first, the slight solubility of the salt. At the ordinary temperature of the air, one hundred parts of water dissolve but five parts of chlorate of potassium. You must, then, in prescribing it, keep within these proportions, if you would have a solution without precipitate. Moreover, when you give this medicine internally, remember its toxic action on the heart, and do not exceed a certain dose. Quite recently Brouardel has reported cases of death from the internal employment of chlorate of potassium.

Copaiba and cubebs have been introduced into the therapeutics of diphtheria by Dr. Trideau, of Andouille.[3]

In his estimation these medicaments have so specific a value in the treatment of diphtheria, that by their methodical employment one could be almost certain to obtain a cure in all his cases. The trials made in our hospitals for children, especially by Cadet de Gassicourt and by Archambault, have shown that unfortunately this is not the case, and that, if in certain instances an amelioration was obtained, in others this kind of treatment fatigued the stomachs of the patients, and put them in very bad condition for supporting the tonic medication so necessary in such cases.

Copaiba and cubebs are given internally in the form of syrup or in the form of "saccharolés," as Delpech prepares them, and their therapeutic action is explained by the elimination of these balsamic substances on the surface of the pulmonary and pharyngeal mucous membranes.

It is the same modifying action which is obtained by subcutaneous injections of pilocarpine, so much extolled by Guttman,[1] and with which, when the first trials were made, such astonishing results were obtained; those, for instance, which Lereboullet has reported (*Bullet. de Thérap.*, July, 1881).

Unhappily, here again the hopes which were awakened by this medicament have not been realized, and if we can rely on the results obtained by Archambault, this medication by pilocarpine is dangerous rather than useful.

In the same group of drugs we must place sulphur and the sulphites, and the preparations of eucalyptus. The first of these medicaments has been counselled by Jadin, Barbosa, Ullersper, Alban Lütz, and by Fergus, the second by Walker.[2]

I have finished this long enumeration of the local medicinal agents of diphtheria, and you see, gentlemen, that besides ice, buccal and pharyngeal injections of solutions of chlorate of potash or lime-water, and pulverizations of carbolic acid, all other means employed are inefficacious or dangerous.

This result should not astonish you, for diphtheria being a general disease, it is impossible that any

---

[1] Delivered in the Hôpital St. Antoine, and translated, by permission, from advance sheets, by Dr. E. P. Hurd, Newburyport, Mass.

[2] He uses the following solution:

℞. Pot. chlor. ..... ʒ ij.
Aquæ ..... ʒ vj.

M. Signa.—Give every hour from a teaspoonful to a tablespoonful, according to the age and constitution of the patient.

He believes that this saturated solution of chlorate of potash exercises a local and general effect on the march of diphtheria: local, as having a caustic action, and as causing disaggregation of the false membranes in the buccal and faucial cavity; general, in restoring the oxygen which the bacteria have taken from the blood, and in destroying the bacteria. He does not leave unnoticed the action of chlorate of potash on the heart, and the dangers which may result from its administration. Cadet de Gassicourt has experimented, in his hospital service, with chlorate of potassium, cubebs, and salicylate of sodium. He has given the chlorate of potassium in the dose of ʒ jss. daily, and has never reached the large doses advised by Seeligmuller. The chlorate of potassium has given the best results. Out of fifteen cases treated by this remedy alone, all got well. Out of seven treated by cubebs, or copaiba, six got well and one died. Out of five treated by salicylate of soda, two died (Seeligmuller: On the Treatment of Diphtheria by Solutions of Chlorate Potass., Bull. de Ther., T. xcii., p. 392, 1877; Cadet de Gassicourt: Bull. de Therap., T. xcii., p. 481, etc.).

[3] Du Traitement de la Diphtherie par le Cubèbe et le Copahu (Gaz. Hebd., p. 186, 28 Mars, 1877), and other citations. This is his manner of administering these remedies. He gives once, twice, or three times in the twenty-four hours the following potion, the patient being an adult:

℞. Pulv. cubebs ..... ʒ ss.
Syrup ..... ʒ iij. and ʒ ijss.
Malaga wine,
Water ..... āā ʒ v.

M. Fiat Mist.

When the cubebs does not suffice, he advises the following "dragée," or pill:

℞. Copaiba, solidified (Mialhe) ..... gr. vj.
Pulverized cubebs ..... gr. ijss.

M. For one dragée, or pill. Signa.—Give twenty to thirty of these a day to an adult. To children give as many dragées per day as they are years old.

[1] The following is Guttman's formula for children:

℞. Chlorhydrate of pilocarpine ..... gr. ½.
Pepsine ..... gr. x. to xij.
Acid hydrochloric ..... gtt. ij.
Distilled water ..... ʒ j. and ʒ v.

M. Signa.—A teaspoonful every hour.

In the case of adults the quantity of pilocarpine in the above mixture is increased to half a grain, and the quantity of pepsine to one-half drachm. Dose as above. Out of eighty-one cases of diphtheria, Guttman reported eighty-one cures.

Demme believes that pilocarpine does not act favorably, except in cases of catarrhal laryngitis, or catarrhal angina, being without efficacy in diphtheria. He advises to inject under the skin the following doses: For a child less than a year old, one milligramme (one-sixtieth grain). For children from one to ten years, five milligrammes. When the doses of pilocarpine are too long continued, according to Demme, they enfeeble the heart muscle.

The method of Guttman has given good results in the hands of Lax, Williams, Lereboullet, Lepidi, Chioti, and Dehio. But others have failed to obtain such favorable results. Archambault, at the Hôpital des Enfants, derived no advantage from it. Schmidt pronounces this method of treatment injurious rather than beneficial. Neumeister, Alfodi, and others are of the same opinion, and it is fair to conclude that no certain curative action can be attributed to it.

[2] Jadin employs sulphur internally and externally—externally under the form of pulverizations, and internally as the *mel-sulphuris*. Barbosa prescribes insufflations of the flowers of sulphur every three hours. Fergus uses strong gargles of sulphurous acid, and inhalations of the vapor of burning sulphur. Walker advises large doses hourly of tincture of eucalyptus globulus in syrup.

local treatment, however powerful, can cure it and prevent its manifestations. Our local treatment, then, is influential only in combating the self-infection provoked by the false membranes, and in diminishing the inflammation of the pharynx, thus allowing the patient to be fed throughout the whole course of the disease. This humble but useful part is all that any local treatment can fill.

Let us now examine the general treatment proposed against diphtheria.

Ignorant of the very nature of the malady, we possess no general specific medication for this affection, and the constitutional treatments in vogue are based partly on hypothetical notions, partly on the necessity of supporting the patient in the struggle going on between his organism and the disease from which he is suffering.

Among the hypotheses which have been made respecting the nature of diphtheria, one of the most satisfying is certainly that of the parasitic origin of this affection, and we shall find here justification for most of the antiparasitic remedies which we have already seen employed locally against diphtheria. I shall call your attention only to the preparations of sulphur, and the acids, carbolic and salicylic.

Sulphide of potassium has been advised by Maunoir, Senf, Chaussier, Klaproth, Bienfait (of Reims), and, more recently still, by Fontaine. As for the sulphites and hyposulphites, they have been for the most part employed in Italy, where Polli has demonstrated their antiseptic properties. Giacchi, who has, above all others, generalized this method, makes use of sodium sulphide in lotions, gargles, and lavements, and of magnesium sulphide for internal administration.[1]

As for carbolic and salicylic acids, it is to Bernier, of Bournonville,[2] that we owe the greatest number of favorable observations respecting the internal use of the former. The second has been the subject of experimentation in Germany by Wagner and Karl Fontheim.[3] But here, also, when we submit these therapeutic methods to the rigorous observation of our hospitals, we still see—as has been the case with other treatments—that their curative effects are far from being demonstrated, and that antiseptic preparations given internally have no certain therapeutic efficacy.

I do not speak of the dangerous modes of treatment, such as blood-letting, mercurial alteratives, and alkalies in large doses. These therapeutic measures are deplorable, for they are not only impotent to prevent the development of the disease, but they weaken the patient, and place him in unfavorable conditions for recovery. Let, then, all antiphlogistic medication (including, of course, antimonials and alkalies) be put aside as certain to be harmful rather than beneficial.

We have then remaining only the supporting treatment, which, though of itself not affecting directly the *materies morbi*, yet enables the patient to struggle against the general affection from which he is suffering. This tonic medication is of such capital importance that it ought to take the precedence of all other modes of treatment, and every therapeutic measure, however energetic and promising, which disturbs the digestive functions, already impaired in such cases, ought to receive unsparing condemnation.

Give your patients milk, concentrated broths, generous wines, alcoholic potions; in a word, the supporting treatment in all its forms. But, unfortunately, you are likely to meet two obstacles; on the one hand, the anorexia which so often accompanies diphtheria, on the other, the difficulty of swallowing which your patients experience; and you ought, especially when treating children, to exercise all your patience, all your energy, all your will, to make them take the wine, the milk, and the broth which you prescribe.

I have thought of employing the hypodermic method in those cases where the patients cannot or will not take food and stimulants, and I have practised on my patients, adults and children, hypodermics of ether, and especially of the double benzoate of caffeine and soda; the latter has appeared to me to have some curative efficacy.[1]

I say *has appeared*, for it is very difficult to judge of the results of such treatment, since we reserve it exclusively for the most severe cases. Under the influence of these injections we have seen the pulse improve in strength and the animal heat reappear; moreover, no injurious local effect is perceived; it is, then, a method which deserves new trials, that its value may be definitely known.

Diphtheria is one of the most contagious diseases. William Ogle has lately shown us the mechanism of this contagion;[2] therefore you will understand the

---

[1] The physicians of Geneva have employed sulphide of potassium. A common practice is to give from seven to fifteen grains in divided doses during the twenty-four hours. Here is a common formula in Geneva:

℞. Pot. sulphid..... gr. xiv.
Syrup..... ʒ ij. and ʒ v.
M. Signa.—A teaspoonful every two hours.

Fontaine substitutes calcium sulphide, five grains to a child two years old, ten grains to adults. Giacchi gives sulphite of magnesium, internally in the dose of ʒ iss. daily. He also uses lavements of sulphite of soda, about ʒ iss., rubbed up in an equal quantity of syrup of poppies, and in a pint of water. Schotlen, of Dresden, has employed in diphtheria the neutral sulphite of magnesium (proposed by Polli in infectious diseases). He dissolves seventy-five grains in four ounces of water; dose, a teaspoonful every two hours. Remarkable results have been claimed—the most malignant cases cured in three or four days, etc. It has been recommended to touch the false membranes with a solution of sulphite of soda in glycerine.

[2] Bernier: Methode phenique dans le traitement du Croup et de l'Angine couenneuse (Soc. de Therap., 1880). Externally by gargles and spray; internally in subcutaneous injections and potions.

[3] Karl Fontheim: Journal für praktische Chemie, 1875 T. ii., p. 57. He employs the salicylic acid in the following manner:

℞. Salicylic acid..... ʒ ss.
Alcohol..... q. s.
Aquæ..... ʒ vj.
M. Signa.—Take twice a day a tablespoonful of this solution. Paint the fauces with a strong solution of salicylic acid.

Laube, of Leipzig, and Edel employ in the treatment of diphtheria inhalations of turpentine and injections into the mucous membrane of carbolic acid. These injections are made twice or three times a day into the tonsils with a Pravez syringe, about half a syringeful at a time. Every hour one or two large spoonfuls of port wine are given, and bladders of ice are applied to the neck.

The following is the treatment of Lolli (an Italian physician), who claims great success in the management of this disease:

1. Never cauterize or deplete, whether by blood-letting, purgatives, or emetics.
2. The nourishment throughout the disease must be substantial.
3. Favor the cutaneous functions.
4. Paint the throat with the following mixture:

℞. Lime-water..... ʒ viij.
Liquor ferri sesquichloridi..... ʒ j.
Acid. carbolic..... ʒ ss.
Honey of roses..... ʒ iv.

M. Fiat Mist.—For painting the diphtheritic patches.

[1] Prepared by Tauret by roasting together caffeine with the acids benzoic, salicylic, and cinnamic. He has thus obtained double salts of the benzoate of caffeine and soda. These salts contain 61 per cent. of caffeine. Dugardin Beaumetz has administered subcutaneously solutions of benzoate of soda and caffeine containing fifty centigrammes of the salt per cubic centimetre. These solutions have never produced any local irritation (Tauret: Sur la Cafeine, Soc. de Ther., Séance du 28 Décembre, 1881, p. 253; Dugardin Beaumetz: Comptes Rendus de la Société de Therapeutique, 1881, p. 257).

[2] William Ogle: Observations on Outbreaks of Diphtheria in Rural Districts (St. George's Hospital Reports, vol. ix., p. 701, 1877-1878). The Dissemination of Diphtheria at Funerals (Boston Medical and Surgical Journal, October, 1876). The following are the results of Ogle's study *à propos* of the contagion of diphtheria: 1. The most attenuated forms of diphtheria and those which have the most benign ap-

importance of prophylactic treatment, and the best of all means of prevention is isolation of the patients.

In the hospitals for children, we have already succeeded these late years in effecting this isolation of diphtheritic patients; unfortunately this is not the case with all our hospital services, and you see often in the infant wards [of the Hôpital St. Antoine] diphtheria declare itself among the little inmates in consequence of the presence in those wards of some diphtheritic or croupy child.

This isolation, then, is an imperative duty which you cannot too strongly urge, and when in a family you have diagnosticated a case of diphtheria, your first obligation is to send away the other children and allow only those to remain about the premises whose services are absolutely necessary in taking care of the patient. No matter how mild the case may seem to be, you must not abate the rigor of this isolation, for the mildest cases may communicate the disease in its most malignant form.

Do not forget, moreover, that physicians and nurses are not exempt from attacks of this disease; and each year we see inscribed on the tablets of marble (veritable golden book of medicine) the names, increasingly numerous, of attachés of the hospitals, who, victims of their professional devotion, have died, smitten by the terrible scourge.[1]

It is necessary, then, that those who have the care of the sick person should be provided with everything which can ward off or prevent the spread of the disease. Therefore, antiseptic liquids are indispensable. Disinfectant lotions of carbolic acid, of phenol, of thymol, of antiseptic vinegars, for all objects which have been in contact with the patient; destruction of all false membranes contained in the expectoration; frequent airing of the room; a phenated atmosphere—all these means ought to be put in use. Do not forget also to have careful surveillance, during epidemics, of schools, chapels, and other places where children congregate, and which are unhappily so often foyers of diphtheritic contagion.

In finishing, allow me, in a few words, to sum up the treatment of diphtheria. You must first be right in your diagnosis, and this is not always easy. I need not here recall to your minds the symptoms of diphtheria, but where you will be very likely to go astray is in distinguishing the simple anginas which are attended with a pultaceous deposit from diphtheritic angina. You know, in fact, that amygdalitis is sometimes the cause of development of creamy points on the tonsils, and the diagnosis is often extremely difficult. You must wait before pronouncing definitely concerning the nature of the disease till the march of the affection has enlightened you.

When you have a case of diphtheria to deal with, you should commence by isolating the patient, then you should clear the throat of false membranes, whether by ice given internally, whether by irrigations of lime-water or lactic acid; you should touch the back of the throat with solutions of chlorate of potash or perchloride of iron, very dilute; in fine, always from the point of view of local treatment, you should make your patient live in an antiseptic atmosphere, by pulverizations (with the steam atomizer and spray-producer) of carbolic acid or solutions charged with thymic acid. You should give internally potions containing quinine or alcohol. You should administer broths, wine, and especially milk. In fine, all the elements of the tonic treatment should be employed. Such is the treatment of diphtheria, and in particular that form of it known as membranous angina. This treatment will sometimes give you considerable success, but never forget that from the standpoint of therapeutic results the morbid genesis of diphtheria exercises a predominant part, and that according to localities and circumstances you will sometimes have remarkable success, and sometimes all your efforts will fail, despite the zeal, the devotion, and the activity which you put in practice.

I do not wish to terminate this long lecture without indicating some of the complications of diphtheria. First, the extension of diphtheria to the skin, when the latter is denuded. This is a point of some interest, in that it contra-indicates in diphtheria the revulsive treatment. There was once a time when vesicatories were used to combat certain of the manifestations of diphtheria, and especially those that affect the pulmonary apparatus. To-day this disastrous medication is completely abandoned, since this denudation of the skin enables the diphtheria to extend its ravages.

This fact should make you examine with care the state of the skin in your patients. Quite recently, one of my externes, M. Gaston, contracted diphtheria at the hospital. One of the first symptoms was the appearance of a false membrane upon a wound acquired at an autopsy, then the diphtheria invaded the larynx, but mildly, and to-day our student is completely cured.

The second complication to which I wish to call your attention is diphtheritic paralysis. You have just seen a good example in our wards. It concerned the cook of the Hôpital Trousseau, who had diphtheria in a grave form, from which he recovered. This man had been gone a month to the Asylum for Convalescent Patients, when he returned with a paralysis which soon became general, affecting even the diaphragm and intercostals. You remember our consternation in presence of this man who was suffering asphyxia under our very eyes. I caused artificial respiration to be practised by the procedure which consists in extending the arms above the head; then I used electricity, and not obtaining the results which I expected, I injected subcutaneously one-thirtieth of a grain of strychnine. This injection seemed, to our observation, and in

---

pearances may, by their contagion, be the point of departure of the most severe cases in other subjects. 2. The public schools are the most powerful instrumentalities in the dissemination of diphtheria, proving the "foyer of contagion" in the seven epidemics which he studied. 3. The *materies morbi* seems to cling for indefinite periods to habitations; in school-houses that had been closed for months in consequence of an epidemic of diphtheria which prevailed among the scholars, he has known the disease to break out again as soon as the building was reopened and the children returned to their places. Churches and places of worship become similarly focuses of contagion, and remain so for indefinite periods. 4. The contagious principle adheres for a long time to the clothing and persons of those who have once been infected and who have recovered. Children who have had the disease have been isolated for six weeks, and even ten weeks, and have given the disease to their companions when they have gone back to school. 5. The ordinary period of incubation is from one to six days (eleven days in a single case). 6. One attack does not give any immunity from successive attacks. 7. Below twenty years of age the chances of contagion are fifty per cent.; above twenty, fourteen per cent. take the disease. Little girls are more susceptible to the contagion than boys (forty-eight per cent. for girls, twenty-eight per cent. for boys). Between the ages of three and twelve the susceptibility to the disease is the greatest. The corpses of individuals who have died of diphtheria have been known to communicate the disease: from the report of the Medical Society of Suffolk County (Boston Medical and Surgical Journal, October, 1876) it would appear that funerals may be sources of contagion.

[1] The Administrator of Public Charities has caused to be placed in the hospitals of Paris tablets of marble, on which are inscribed the names of internes and externes attached to these hospitals who have succumbed to a contagious disease, cont acted in the exercise of their functions.

the opinion of the patient, to have an excellent effect, and from this moment he began to have power to breathe, and to-day the cure is complete.

You can put this practice into usage in similar cases, and you can employ electricity, stimulating frictions, the preparations of strychnia; in fine, all the means at your disposal to augment muscular contractility.

So far, gentlemen, I have supposed that diphtheria has only affected the isthmus of the fauces, and I have considered only membranous angina. Unhappily, false membranes invade other points, and in particular the larynx and respiratory passages, determining accidents which require new therapeutic procedures. These I shall consider in the next lecture, in which I shall treat of croup.

Original Communications.

ACUTE MILK-POISONING.[1]

By E. F. BRUSH, M.D.,

ATTENDING PHYSICIAN TO THE NEW YORK INFANT ASYLUM.

"MANY of the diseases affecting the digestive organs in infancy are nothing more nor less than milk-poisoning. This is absolutely the cause of *cholera infantum*. I think we should be justified in dropping entirely from our nomenclature the term *cholera infantum*, and calling the disease which has hitherto borne this misleading name by its real term, "acute milk-poisoning." We would thus simplify the treatment by keeping before the practitioner the true cause of the disease, and no other suggestion would be necessary to indicate that the poison ought to be stopped. This is not done now, nor do the text-books point out the absolute necessity of this being done. There is no doubt, too, it will not be done as long as we account for the disease by teething, excessive heat, brain troubles, and so forth. When I tell you, gentlemen, that I have looked to the health and feeding of more than two hundred children this summer, and have not lost one by any acute intestinal disturbance, you may concede to me the right to speak; and when I have given you the facts winnowed from a year's observations of diseases caused by milk, I cannot but feel you will agree with my conclusions.

Even if we had not facts it seems to me that we could theorize to the same conclusions. Our cows are secreting milk abnormally, and I use the word "secreting" in the sense we understand it physiologically. We keep up the activity of the mammary gland from parturition to parturition, this is, through heat and pregnancy. This process being carried on through generations in the bovine race has resulted in the mammary becoming an excretory gland. When a milking cow eats food which would cause diarrhœa in other animals, she simply gives more milk, and the bowels are seldom much disturbed; but the poison is conveyed to the infant. As on this fact much of my argument is based, and to show that it is no new fact of which I am the solitary observer, I quote the following statement from J. P. Norton, M.A., Professor of Scientific Agriculture at Yale College: "All the effects of poisoning may be produced by the milk without the cows being apparently affected by the pasture." Now the conditions that render milk poisonous are:

1st. *Feeding.*—The sudden change from the dry food of winter to the full flush of grass, picking up green fruit, eating brewers' grains which make the milk more albuminous and therefore more prone to putrefaction with the increase of summer temperatures, eating poisonous weeds, and drinking poisonous stagnant waters.

2d. *Treatment.*—Dairy farmers endeavor to have their cows calve in spring time when the grass is plentiful, because then the feeding is cheapest and the amount of milk to be got is greater. Now if a cow calves in May, she is usually in heat again in forty days, this brings the period to the last of June or the beginning of July. If she were allowed to become pregnant then, her calving time would occur too early next year to get the flush of milk at grass time. Consequently she is allowed to worry and quite often excite the entire herd. This condition affects milk so perniciously that cheesemakers exclude it from the factory; the odor sometimes is perceptibly putrid, and almost always easy to detect when the milk is heated in a water-bath. Again, the milk is affected when the cow takes the bull. I have found by observation of my own cows that the milk following the act is always decidedly acid. In the subsequent pregnancy there can be no doubt that the nutritive quality of the milk is lowered. Last, but not least in the treatment of milch cows as a cause of poisonous milk, is the cruel abuse to which they are subjected.

3d. *Diseases which space will not at this time permit me to enumerate.*—I will, however, here record my observations on a very common disease in milch cows—common because it occurs frequently and requires little or no treatment, and the milk thus affected finds its way to the market, to convey poison to the children. Last winter I made an experiment on one of my own cows. I bruised one quarter of the udder, thus producing traumatic garget. This often occurs in pastures by the cow striking the udder against stumps and the like. I found the milk from the gland in the affected quarter for a number of days stringy, lumpy, and pus-like, but always alkaline. The milk from the three unaffected quarters presented no abnormal appearance; but, while the traumatic condition existed, was always decidedly acid. When this condition had lasted four days, I gave to one of my own children, aged sixteen months, about four ounces of this acid normal-appearing milk. This was at five o'clock in the evening. The child fell asleep, but was awakened in two hours, crying, apparently with stomach-ache. She was kept awake till past midnight, and a large quantity of acid was voided *per rectum*. The next day the bowels were slightly disturbed. It is easy to imagine if four ounces had this effect, what would be the condition if the child had been fed continuously on such milk.

Returning to the results of treatment, I will cite the following case: One Saturday afternoon, while watching some boys playing ball on the common, I noticed a herd of ten cows feeding in an adjoining lot, attended by the owner, a milkman. Suddenly a cow came running to the herd and mounted the first cow she reached. The owner of the herd picked up some stones and pelted the offending cow, but was unable to drive her away. She continued to mount the cows as they came near her, till finally the entire herd became excited. Then a woman, the owner of the bulling cow, came and attempted

[1] Read before the Westchester County Medical Society, September 12, 1882.

to drive her home, but could not do so. Then her boy, a lad of ten, armed with a big stick, came and pounded the cow considerably, but without separating her from the herd. Finally, the old man made his appearance, carrying in his hand a heavy whip. He walked up to the cow, gently holding out his hand as if to feed her, and when close to her laid on the whip quite severely, with the effect of calming her immediately. She trotted for home, he running behind her, giving her a blow every time he came close enough. When she was in the yard, a small enclosure, he beat her for several minutes, and after she was in the stable I could hear an occasional blow. This all occurred just before milking-time. I was deterred from making an attempt to prevent this cruelty, because of the opportunity thus presented to observe the effect of milk, from a cow thus treated, in the feeding of children. This occurred in my own immediate neighborhood, and I knew that if any children were taken sick I would hear of it. As soon after the occurrence as possible I called on my friend Dr. Campbell, and related the affair to him, asking him to find out who received milk from the cow, as the owners were patients of his. On Sunday evening he was called to see a child, eight months old, who had been attacked on Saturday night with sharp pains. It had been kept awake all night; it had suffered mild attacks of diarrhœa during the summer, but had never before been disturbed during the night, the attacks always passing away with treatment. This attack, besides keeping the child awake, was accompanied by constant vomiting, which had not characterized any of the previous attacks, and there had been eighteen movements of the bowels in twelve hours, mostly green and undigested milk, an occasional discharge of dirty, mud-colored, watery, and offensive material. The child was very sick, and developed profound symptoms of *cholera infantum*. The doctor inquired on what the baby had been fed, and the answer was, "The bottle, with the milk of one cow." On further inquiry, he learned the milk had been procured from the above-related cruelly abused cow. The child recovered because the poison was stopped, although he was sick for several days.

This accidental observation is not an unusual occurrence; it, or something like it, is happening every day, though we may not be able to follow it up so closely. Take, for instance, the small dairy, with its four or five cows, not sufficient to pay the expense of keeping a bull. The rutting period occurs in the hottest weather; one of the farm hands is directed to drive the cow to the bull, perhaps a distance of two or three miles. Usually he is armed with a big stick, and the cow, especially in this condition, is loth to leave the herd without some emphatic persuasion. She is prodded, attacked, run round the corners, and the ordinary farm-laborer, when he has run fifteen minutes, is apt to get mad. There is no doubt that cases of this kind, if we follow them up, would reveal a like result of acute milk-poisoning.

The following cases of acute milk-poisoning, arising from causes not discovered, are interesting as illustrating this condition.

On a Sunday afternoon a friend of mine called me hurriedly to see his child, a baby ten months old, and bottle-fed. As he thought it was dying, I obeyed, and was soon at the house. On my arrival I found the child in a profound tonic convulsion. I learned from the parents that I was called in the absence of their regular physician, who had seen the child three hours previous. The sickness had commenced the day before. When this physician had seen the child that day, he inquired on what it was fed, and was told "milk and one of the patent foods." He approved of the diet, and left some medicine. The parents had no idea the child was very sick, so they fed it, and it went to sleep. They went down to dinner, but returning afterward to the room where the baby was, they found it struggling in a convulsion—the convulsion it was in when I came. I immediately wrapped the child in a cold, wet blanket, and endeavored to get a little brandy into its mouth, abstaining from any other treatment, as I knew the attending physician would be in immediately. He came a few minutes after my arrival, when I surrendered the case to him. The father wished me to stay, and I did so, simply watching the case. When the child was recovering from the convulsion it vomited several large masses of solid caseine, and its bowels were moved several times. When the convulsion had completely subsided I took my departure, but was again called between six and seven in the evening. When I reached the house the child was dead.

On the next day (Monday) I was called to see a child, nine months old, bottle fed, who received his milk from the same farm, and had been suffering from a severe diarrhœa since the preceding Friday. I found the child very sick, vomiting and purging. The alvine discharges were mostly green and watery, occasionally mud-colored. I directed that he should receive no milk under any circumstances whatever, but be fed on beef solution and oatmeal-water, and receive every hour a teaspoonful of the following:

℞ Tr. opii..... ℥j.
Tr. ferri..... ℥viij.
Aqua..... ʒj.

The next day I found there had been no abatement in the number of movements of the bowels, but there had been no vomiting. I changed his food to kumyss and he required no farther treatment till two weeks later, when I put him on other food simply for economy. He has continued to do well ever since. Is there any reason why we should not call these cases "milk-poisoning"? One with treatment and a continued use of the milk died; the other, with no treatment to speak of but stopping the milk, made a good recovery. I cite these cases not because they were the only ones observed, but because occurring simultaneously, and getting their poison from the same source, they illustrate the necessity of calling the disease from which they both suffered "acute milk-poisoning."

These are some of the conditions that are regularly every year swelling the rate of infantile mortality. Usually the beginning of summer complaints in fed babies is at the time when imperfect, worm-eaten green apples are falling; it is continued through the rutting, bulling, and conceiving period, to reach its fiercest condition when the pastures are dried by the usual autumn droughts, when the cows eat the poisonous herbs that they had avoided when the grass was green and plentiful.

Some years ago in the Alleghany districts, owing to some poisonous herbage, the cows secreted a milk which was poisonous. As this region was remote from a city market, the natives were compelled to consume their own milk, and were not long in finding that a disease from which they all suffered was caused by the milk, its use was quickly stopped and every visitor to the district was advised to abstain

from it. They had no statistical tables to consult, and did not therefore find that the sickness increased as the thermometer rose; they had no way of accounting for the disease except from its simple cause, milk, and therefore they called it simply "milk sickness," and invoked the power of the government to suppress it.

We physicians of Westchester County, surrounded as we are by the thousands of cows that supply the city with baby-food, are in a position to teach the city teacher the truth regarding the cause of the most fatal malady from which the city child suffers during the tedious heats of summer. I have once before appealed to you to bestir yourselves in the question of procuring legislation to regulate the milk supply.

Although no advance has been made, I do not lose hope, but appeal to you still.

Let us make ourselves familiar with the sources which supply the milk to the babies under our care. The dairy farmers are sadly in need of intelligent instruction, none of the works designed for their use teach them the dangers of poisonous milk. Even our boards of health are not treating the subject intelligently. There is much to do. All the conditions producing poisonous milk are not yet discovered, but we can teach what we *do* know, and while thus teaching may discover new facts.

MOUNT VERNON, N. Y.

ON THE PROPER METHOD OF EXECUTING THE SENTENCE OF DEATH BY HANGING.[1]

BY GRÆME M. HAMMOND, M.D.,

INSTRUCTOR IN DISEASES OF THE MIND AND NERVOUS SYSTEM IN THE NEW YORK POST-GRADUATE MEDICAL COLLEGE, PHYSICIAN TO THE DEPARTMENT FOR NERVOUS DISEASES IN THE METROPOLITAN THROAT HOSPITAL, ETC.

ON every occasion that the executioner performs his duty upon criminals sentenced to be hanged by the neck until they are dead, the newspapers teem with sensational accounts, headed by the most agonizing phrases in large letters, of the terrible sufferings the executed individual is supposed to have undergone. The hangman, if he does not succeed in breaking or dislocating the neck of his victim is held up to public execration as a bungler, and he is accused of having slowly strangled him, at the same time inflicting much unnecessary suffering. These descriptions harrow the minds of the tender-hearted, and not only produce a great deal of undeserved sympathy for the condemned, but tend to disgust many strong-minded and sensible people with the death punishment. As one of the consequences, much ingenuity is expended in devising means for insuring the dislocation of the neck, the idea being entertained that if this is accomplished the executed person does not writhe or suffer, but dies without muscular contractions and without pain. The object of this paper is to inquire into the facts connected with the questions to which I have referred, and to suggest the proper manner of executing the death penalty upon criminals sentenced to be "hanged by the neck until they are dead."

As intimated in the foregoing remarks, there are two distinct ways of causing death, by the execution of individuals, according to our present methods.

In the first, which is by far the oldest, and which was the mode contemplated when the punishment of hanging by the neck was first adopted, the subject is strangled. The air is cut off from entering his lungs. The vessels of the neck, which carry the blood to the brain and return it to the heart after it has fulfilled its office, are violently and suddenly compressed so that the circulation is interrupted. In early times the malefactor who was obliged to undergo this punishment stood on the ground, and with the noose around his neck and the rope thrown over the limb of a tree, was lifted up in the air and left hanging till life was extinct.

At a later period he stood on the rung of a ladder placed immediately under the gallows, and at the critical moment was pushed off by the executioner. Or he remained erect on the cart in which he was driven from the prison to the gallows, and at a given signal the vehicle was driven away and he was left hanging by the neck to the beam above him. In the American army this has been the method generally adopted when hanging has been the punishment. Major André suffered death according to this manner, and during the Mexican war many deserters were executed in a similar way. Lynchers, who take the law into their own hands, employ the cart, or, perhaps more frequently, throw the rope, one end of which is fastened around the supposed criminal's neck, over the limb of a tree and then pull him from the ground.

In Turkey and other eastern countries strangulation is effected by means of the bowstring. A loop is made in the string attached to a strong bow. The victim's neck is placed within it, and then the springing of the bow acting upon the cord constricts the neck and death soon follows. Among the ancient Jews a loop of a strong cord was placed around the neck of the condemned, and then several persons pulled at each end till life was extinct.

In endeavoring to break the neck of the person to be executed, two methods are employed. In the one he is lifted suddenly and with force from the ground while the rope is around his neck. In the other he falls through a trap suddenly sprung, and is left dangling in the air. By either of these methods strangulation is effected with more or less completeness, and sometimes the second cervical vertebra is dislocated and the odontoid process pressing upon the spinal cord is supposed to cause instant death. The trap is said by Calkins[1] to have been the invention of a London surgeon at the period of the Restoration.

The Rev. S. Houghton, M.D.,[2] for the purpose of securing dislocation of the neck, studied the subject with great thoroughness, and proposed a formula for regulating the counter-weight and the distance of the fall. Among the first trials of it, however, was the case of a man whose head was actually jerked from his body. Death usually ensues by strangulation, but the process is a bungling and tedious one. By the New York method of jerking the body into the air by releasing a heavy weight, it is rarely the case that the neck is broken, and strangulation is not neatly and expeditiously effected. I am clearly of the opinion that in order to obtain a speedy and painless death it is neither necessary nor desirable that the neck should be dislocated. On the contrary, this should never be attempted, for its accomplishment does not in the least facilitate the desired result, but the efforts in this direction always

[1] Read before the New York Medico-Legal Society, September 27, 1882.

[1] Judicial Executions of Capital Crimes, Quarterly Journal of Psychological Medicine, vol. iii., 1869, p. 297.

[2] Philosophical Journal, 1866.

lead to imperfections in securing rapid and certain strangulation, which is, I think, not only the speediest and most certain method of inflicting capital punishment, but is at the same time also totally painless.[1]

For the support of these views I have to advance the opinions and investigations of others, as well as more recent investigations of my own.

Lord Bacon[2] says that he remembers to have heard of a gentleman who, being curious to know what the sensations of hanging were, hung himself by mounting on a stool and then dropping himself off, thinking, of course, that he would be able to regain the stool as soon as he liked; but this he was unable to do, and he was only released by a friend who was present. On being asked what he had suffered, he said that he felt no pain, but at first he saw round about him the appearance of fire burning; that was succeeded by an intense blackness or darkness, and then by a kind of pale blue or sea-green color, such as is often seen by fainting persons.

Montagnac, who was saved by Marshal Turenne from death by hanging after the rope had broken, said that in an instant all sensation ceased and that a vivid light, beautiful beyond expression, seemed to fill all space.

Fleischmann[3] performed upon himself several experiments for the purpose of ascertaining the sensations produced by hanging. He found that a sense of great weight was experienced, together with a feeling of abolition of all sensibility and a hissing noise in the ears. The first experiment which he instituted lasted two minutes.

Taylor[4] says: "Death from hanging appears to take place very rapidly and without causing any suffering to the person. It is observed that in those who are criminally executed there are often violent convulsions of the limbs and trunk. There is no reason, however, to believe that the individual suffers pain any more than in the convulsions of an epileptic fit."

On recovery, there is an entire loss of consciousness in both cases.

Tardieu,[5] on information supplied to him by Jacquemain, physician-in-chief to the prison Mazas, where many successful and unsuccessful attempts to commit suicide by hanging were made, makes the following remarks relative to the sensations attendant on the act:

"At the moment that the body, hanging by the cord, or by other material, is left to its own weight, a great degree of heat is felt in the head, loud noises of a musical character are heard, the limbs seem to have acquired an extraordinary weight, and then all sensation is abolished. Sometimes, also, from the first moment the individual experiences no feeling of any kind, as many of those who have been resuscitated have declared in the most positive manner. I think this is more frequently the case than is ordinarily believed. In such cases there is immediate syncope. I have never had the least evidence to show that the opinion generally entertained is correct, that during the first moments of hanging there are voluptuous sensations. . . . .

"Then the second stage begins. It is marked by convulsions, by spasmodic contractions of the muscles of the face, by contractions of the pupils, and by contortions of the eyeballs, which give to the countenance a horrible expression. It is to hide this that in those countries in which hanging is still in use as a punishment, care is taken to draw a cap over the face. The convulsive movements become general, and all the limbs, especially the lower extremities, are thrown into violent convulsions."

Tardieu expresses the opinion that death certainly takes place within ten minutes. Taylor thinks that after five minutes resuscitation is possible. Obviously, the duration of life depends upon the care taken in adjusting the noose so as not only to compress the vessels, but to abruptly close the trachea so as to prevent the access of air to the lungs. Those alleged cases of recovery after the body has remained suspended for half an hour or longer, are regarded by the best authorities as resting on insufficient evidence.

In hanging, death takes place either by asphyxia or apoplexy, or both. As Taylor remarks, if the cord is loose or applied too high up on the neck, a small quantity of air may still reach the lungs, and life will be prolonged till the slower death by apoplexy takes place. The main object of the executioner should be to adjust the noose in such a manner as to close the windpipe at once, so as to produce immediate asphyxia. Usually, both apoplexy and asphyxia result if the execution is properly accomplished.

According to Remer, of 83 cases of death by hanging, 9 were by apoplexy, 6 by asphyxia, and in 68 both conditions existed. Of 85 cases collected by Casper, in 9 there was apoplexy, in 14 asphyxia, and in 62 both conditions.

My own experience was somewhat similar to that obtained by other observers, except in the fact that strangulation was not carried to that point at which respiration ceases entirely. My object was more particularly to demonstrate the painlessness of the operation than to show the existence of any new sensations. With the assistance of two medical friends, I was partially strangled in the following manner: After being placed in a sitting position in a chair, a towel was passed around my neck and the ends twisted together. Of course with every twist of the towel very forcible compression was made on the entire circumference of the neck. One of my friends was entrusted with the operation of twisting the towel, while the other was stationed in front of me, in order that he might watch my face, and at the same time make the necessary tests of the cessation of sensibility.

My sensations from the first twist of the towel may be briefly stated as follows: I first noticed a sensation of warmth and tingling, beginning in the feet and quickly passing over the entire body; vision partially disappeared, but there was no appearance of any colored lights. My head felt as if about to burst, and there was a confused roaring in the ears, such as is heard when the ear is placed against the opening of a shell. I suffered no loss of consciousness, and was fully able to tell my friend whether I felt any pain from the knife thrusts he was inflicting upon my hand. In one minute and twenty seconds from the commencement of the operation all sensibility was abolished. After a few minutes' rest, a second trial was made in the same manner as before. This was followed by symptoms similar in character to those mentioned in the first attempt, except that sensibility ceased in fifty-five seconds.

[1] Historia Vitæ et Mortis, 24.
[2] Ibid.
[3] Des differents genres de mort par strangulation. French translation in Annales d'Hygiene publique et de médicine legale. Série 1, t. viii., p. 452.
[4] The Principles and Practice of Medical Jurisprudence, vol. ii., p. 35. London, 1873.
[5] Études médico-legale sur la pendais n. etc., p. 7. Paris, 1870.

A stab with a knife, sufficiently deep to draw blood, was indicative of no sensation whatever.

Taking into consideration my own symptoms, and the accounts of those cases previously described in this paper, it is obvious that the proper and orderly way to execute the law in the case of a person condemned to death by hanging, is not to let him fall or to jerk him into the air, but to stand him on the ground, or on a suitable platform, and to adjust the noose carefully around his neck below the larynx. If he is made to fall through a trap or is lifted suddenly from the ground, this important end can never be assured. The noose is almost certain to become displaced, and hence death is not so sudden as it ought to be. Having arranged the noose properly, the condemned person should be raised from the place on which he is standing by pulling on the rope, which should pass over a pulley fixed to a beam above, and he should be allowed to hang for thirty minutes. The rope should be soft and flexible, so as to fit closely to the neck. Probably one of cotton or flax would be preferable to the hempen cord usually employed. Carried out in this manner, an execution by hanging will be effectually and mercifully performed. The condemned would undergo no physical or mental suffering from the moment the suspension began, and his life would be taken as speedily and with as much freedom from horrible events as the circumstances of the case would allow. It would be better with persons weighing under one hundred and fifty pounds to attach a weight to the feet, so as to insure a sufficient degree of traction on the cord. It is supposed by many that the dislocation of the neck produces instant death; such, however, is by no means certainly the case. There are instances on record in which the vertebræ of the neck have been dislocated and recovery has taken place. Moreover, even when death does occur, it is no more instantaneous than when asphyxia is accomplished, and there is no greater freedom from convulsions. In some recent cases of hanging there were no convulsions of the limbs, and yet the neck was neither dislocated nor broken.

Of these things we may be positively sure, that from the instant suspension takes place there is no sensibility to pain, and that the convulsions which ensue are no more evidence of pain than are the movements of a decapitated chicken. They are such as always ensue with insensibility when the blood-vessels of the neck and the trachea are suddenly closed.

The Influence of Early Feeding on life, both infant and adult, is very great. Inquiries made in Germany concerning the comparative vitality of children under various methods of feeding, exhibit some peculiar results. Thus of 100 children nursed by their mothers, only 18.2 died during the first year; of those nursed by wet-nurses, 29.33 died; of those artificially fed, 60 died; and of those brought up in institutions, 80 died to the 100. Again, taking 1,000 well-to-do persons, and 1,000 poor persons, there remained of the prosperous after five years, 943, while of the poor only 665 remained alive; after fifty years there remained of the prosperous 557, and only 283 of the poor; at seventy years of age there remained of the prosperous 235, and but 65 of the poor. The total average length of life among the well-off class was found to be fifty years, as against thirty-two amongst the poor.—*Students' Journal.*

THE EXEMPTION OF PLUMBERS FROM ZYMOTIC DISEASES.

By F. A. BURRALL, M.D.,

NEW YORK.

This communication originated in an attempt to explain the exemption of plumbers from zymotic diseases by inferences drawn from Pasteur's experiments in the prevention of *charbon* among animals. Inasmuch as the inoculation of sheep with the cultivated *bacillus anthracis* prevented anthrax among them, it seemed to me that plumbers perhaps underwent a kind of inoculation or seasoning which made them impervious to zymotic disease. Some persons have believed that this freedom of plumbers from such diseases shows that severer emanations are not unhealthful, since this class of artisans must appropriate an unusual quantity of such emanations while at their work, and yet they do not seem to suffer seriously. But observation and clinical experience have demonstrated conclusively that broken waste-pipes and leaking sewers are a cause of zymotic disease, whatever may be the scientific explanation of the fact, and it does, therefore, seem strange that such diseases as diphtheria and typhoid spare that craft which is apparently so exposed to them.

On second thought it seems to me that the laws concerning germ inoculation are not yet sufficiently established to serve as a basis for inference, and I will therefore leave this suggestion of a possible cause of immunity without following it further at present, hoping that others may be led to think upon the subject and throw more light upon it when further experiments afford a better ground for deductions.

If we examine the causes of death among plumbers in New York during 1879 and 1880, as is shown in the annexed list, kindly furnished me by Dr. Roger S. Tracy, of the Metropolitan Board of Health, we shall be surprised to notice how few of the deaths are from those diseases which are regarded as intimately connected with the development of germs. It is true that phthisis heads the list, and some might regard the large mortality from it as sustaining Koch's views of its zymotic origin; but Koch's views are still *sub judice*, while the cold and dampness to which plumbers are exposed are causes which more readily explain the relatively large mortality among them from pulmonary disease. Here is the list of deaths, 64 in number: There died of phthisis, 22; pneumonia, 10; apoplexy, 3; Bright's disease, 2; nephritis, 1; perinephretic abscess, 2; cardiac disease (valvular), 2; cardiac hypertrophy, 1; rheumatism and cardiac disease, 1; chronic hepatitis, 1; fatty liver and pulmonary abscess, 1; cirrhosis (intemperance), 1; pernicious intermittent, 1; cholera morbus, chronic nephritis, 2; general paresis, 2; epilepsy (fell with face in pillow), 1; sarcoma, left superior maxilla, 1; insolatio, 1; syphilis (melancholia), 1; fractured skull, 1; burns, 1; amputation for caries of femur and knee, 1; drowning, 1; suicide (pistol), 1; stricture and urinary infiltration, 1; peritonitis, 1; cerebro-spinal meningitis, 1; total, 64.

It is estimated that there are in New York about 3,000 plumbers. During 1878 there were 4,466 deaths from phthisis in the city, and 2,288 from pneumonia. In 1879 there were 4,343, and 2,554 deaths from the same respective causes. Hence the number of deaths from these diseases among plumb-

ers is much above the general average, which is about one in seven for phthisis, and one in 11.09 for pneumonia.

It is a well-known fact that plumbers are not exempt from maladies which are caused directly by the character of their work. They suffer from attacks of nausea, diarrhœa, and vomiting during the performance of some of their duties, in which the exhalations are unusually offensive. Whether these attacks are merely the result of a nervous impression upon the special senses, or temporary blood-poisonings, is not clear; at all events they are generally of short duration, and, as the statistics show, not mortal.

Admitting, then, that zymotic diseases are a result of exhalations from waste-pipes and sewers, and that the records do not show plumbers to be especially liable to such diseases, how can we explain the fact?

I think an explanation is suggested when we consider the different circumstances under which the plumber is exposed to mephitic exhalations compared with other members of the community. He is in contact with them while awake and temporarily, others as a rule when asleep. It is well known that the body during sleep is in a condition of diminished defence against noxious agents, and the exposure is not intermittent but steady for several hours. Therefore I would explain the plumbers exemption from zymotic disease, while others of the community suffer from it, by the proposition that others are *in a continued exposure during a condition of diminished physical resistance*, while the exposure of the plumber is intermittent and during wakefulness.

I can understand that at the present time, when the air is vocal with the hunt for germs, the excessive mortality among plumbers from phthisis and pneumonia will be considered as additional evidence of the parasitic nature of these diseases which are already on the list of suspects. But I am writing only on the basis of established facts, and while impressed with this large mortality from diseases which some associate with the presence of a parasite, cannot make inferences from conclusions not yet established.

48 West Seventeenth Street.

Curing Disease by Anointing with Oil.—The mountain evangelist, Rev. Mr. Barnes, having ousted Satan from a number of Western strongholds, has attacked Cincinnati. His campaign may attract medical attention, since he cures disease as well as saves souls. His method is to anoint with oil, at the same time uttering a brief prayer. A reporter, interviewing him, asked if he had cured many diseases in Indianapolis. "There were," he said, "some very remarkable cases. One was that of an old man, almost helpless with rheumatism, who was obliged constantly to use crutches. He was a member of the Roberts Park Methodist Episcopal Church. He was anointed with oil, and his faith took hold on Christ for healing, which occurred almost instantly. The next day he came to the church without crutches, and testified before the assembly of the healing, and declared he could run a foot-race, and praised the Lord with all his might. Another case was one of a woman subject to spasms for years, and many others." Here Mrs. Barnes declared it to be so common a thing in their experience that the wonder is, not that the persons are healed, but that all Christians do not at once go to Jesus when they are sick.

THE RECOGNITION OF MICROCOCCI.

By GEO. M. STERNBERG, M.D.,

Surgeon U. S. A.

The assumption by Dr. Gregg (The Medical Record, August 19th) that Oertel, Ebert, Klebs, Wood, Formad, and others who have studied diphtheria by the experimental method, are unfamiliar with the appearance of coagulated fibrin, because they do not find it necessary to refer to it in giving an account of their observations relating to micrococci, does not seem to call for any reply from me, and I doubt whether the gentlemen referred to will think it necessary to come forward in their own defence. Nor do I consider it worth while to make myself the champion of the well-known micro-organisms whose existence is called in question by Dr. Gregg.

The only object of my first communication was to show that modern science offers very definite and satisfactory tests for the recognition of micrococci. This being established, we must judge of the value of the observations of particular individuals from our knowledge of their skill as microscopists, pathologists, etc., or from the record which they give us of the methods employed in their researches.

A desire to be brief caused me to be less explicit in my first communication than may have been desirable, especially as regards the chemical tests relied upon for the recognition of micrococci. I therefore, somewhat reluctantly, find myself seated for the purpose of writing a second paper upon the same subject.

The chemical tests referred to in my previous note depend upon the fact that micrococci are *unicellular vegetable organisms*, having a limiting envelope of cellulose which resists the action of caustic alkalies and of strong acids,[1] while fibrin is dissolved by these reagents.[2]

Other tests of less value, but which, nevertheless, aid greatly in the recognition of micrococci, depend upon the action of various staining reagents, and especially of hæmatoxyline and the aniline dyes,[3] by which they are deeply colored. It is true that fibrin and precipitated albumen are also stained by the aniline dyes, but by the use of high powers—*e.g.*, the $\frac{1}{12}$ in. homogeneous immersion objective of Zeiss—the experienced eye can readily distinguish micro-organisms, whether spherical, rod-shaped, or spiral, from fibrils and granules of fibrin.

With lower powers, even experienced observers are liable to make mistakes if color-tests and morphological characters are relied upon.

This was long since pointed out by Cohn, who calls attention to the fact that the slender filaments of coagulated fibrin resemble closely filamentous bacteria.[4]

Klein, with the honesty which characterizes the true man of science, has even pointed out the fact that in one of his earlier researches he mistook "the products of coagulation of some albuminous or kindred material" in the pustules of sheep-pox for the mycelium of a fungus.[5]

The larger rod-shaped micro-organisms, such as the bacillus of anthrax, are easily distinguished by moderate powers—250 to 500 diameters—when they

[1] *Vide* The Bacteria (Magnin) (writer's translation), pp. 35 and 49–51. Boston: Little, Brown & Co., 1880.

[2] *Vide* Foster's Text-Book on Physiology, App. p. 789. Macmillan & Co., 1880.

[3] L. c., p. 55.

[4] The Bacteria, l. c., p. 50.

[5] Report of Medical Officer of Privy Council and Local Government Board, n. s., No. viii., p. 23.

are stained with methyl violet, and their recognition is so simple a matter that a novice in the study of this fluid could scarcely fail to recognize them, when present, as foreign elements. The difficulty would be greater for slender filamentous forms, such as the spirillum of relapsing fever—*Spirochæ Obermeieri, Cohn*—and the septic vibrin of Pasteur, were it not that these organisms present the character of active motion, which at once distinguishes them as living parasites when they are found in the blood.[1]

The recognition of micrococci is, however, admitted by all to be a more difficult matter, and those who have given the most attention to the study of these minute organisms are agreed that the test by cultivation in a sterilized fluid is the most reliable one, and that it should be resorted to in all cases of doubt. The value of this test is not likely to be weakened, for those who are familiar with the most approved methods of conducting culture experiments, by the ingenious attempt of Dr. Gregg to make the observed facts conform with his theory.

For the benefit, however, of those who are not so familiar with the literature of the subject as Dr. Gregg claims to be—he is "not a little amused" at my remark that his statements "could hardly come from one familiar with the literature of the subject"—I will briefly mention some of these facts.

Blood drawn with proper precautions from the circulation of a healthy animal, with a sterilized vessel, and kept in a culture oven at the normal temperature of the human body, remains free from micrococci and other micro-organisms,[2] and the fibrin contained in it does not in coagulating assume the form of spheres joined in pairs, in chaplets, etc. But upon the introduction of a small amount of fluid containing micrococci recently developed in a culture-solution, and having the morphological and chemical characters already referred to, the blood is quickly—within twenty-four hours—pervaded with a multitude of similar spheres. The spheres may be propagated in a culture-fluid (Pasteur's or Cohn's fluid) which neither contains fibrin, albumen, nor any other animal product.

By virtue of this power of self-multiplication these spheres are recognized as living organisms, and by their resistance to the action of various reagents which dissolve the limiting membrane of animal cells, they are recognized as vegetable organisms.

These micrococci are widely disseminated in nature, and are found in abundance in normal human saliva, upon the surface of mucous membranes generally,[3] and in pus from open wounds.[4]

They may be demonstrated by the use of good objectives and by staining with methyl violet, in the smallest drop of saliva or of mucus which can be obtained from the buccal cavity of healthy persons.

That they are also present in diphtheritic exudation occurring in the fauces, is proved by direct observation and by culture-experiments, and was *à priori* to have been anticipated, in view of the fact previously stated, viz., their constant presence in the buccal secretions of healthy persons.

[1] *Vide* Ziemssen's Cyclopædia of the Practice of Medicine. Am. ed. vol. i., p. 263; and a paper by the present writer in Studies from the Biological Laboratory, Johns Hopkins University (Balt.), vol. ii., No. 2, p. 190.

[2] The writer has frequently repeated this experiment. *Vide* also the recent work on Antiseptic Surgery, by Watson Cheyne, pp. 33–36. London: Smith, Elder & Co., 1882.

[3] *Vide* paper by present writer, illustrated by photo-micrographs, A Contribution to the Study of Bacterial Organisms, etc. Studies from Biological Laboratory, Johns Hopkins University, vol. ii., No. 2, pp. 157–181.

[4] See Plates 1, 2, 3, 24, in Cheyne's work, l. c.

Finally, the writer has made numerous photo-micrographs[1] of micrococci obtained from the various situations named and from fluids in which they have been cultivated, and he would challenge Dr. Gregg to produce photo-micrographs of fibrils and granules of fibrin which resemble these micro-organisms sufficiently to justify his assumption that they are identical with them.

[1] *Vide* heliotype plates illustrating papers already referred to.

A REPORT OF CASES OF REMOVAL OF A PORTION OF INTESTINE.

By WILLIAM FULLER, M.D.,

GRAND RAPIDS, MICH.

LATE PROFESSOR OF ANATOMY, BISHOP'S COLLEGE, MONTREAL, CANADA.

I THINK that a record of the following cases will be of service, because on several occasions I have seen such cases abandoned as hopeless by surgeons of reputation.

On September 4, 1881, I was called to see a Mrs. V——, aged fifty, residing in this city, who had been suffering from a strangulated femoral hernia for four days, being reduced to a state bordering upon collapse by pain and vomiting. An exploring needle introduced into the tumor disclosed an odor of putrefaction and a discharge of a turbid reddish color. I informed the family that the only possible hope was in a removal of a portion of the intestine, to which they consented.

She was placed under chloroform, an incision made down to the sac, which was separated from the surrounding tissues and opened. The sac contained a fœtid, purulent, reddish-brown fluid, and a knuckle of small intestine, which was adherent to the sac by lymph in a partially broken-down condition. The intestine was of a purplish-green color; it was carefully separated from the sac, opened, and the finger introduced, in order to dilate the abdominal opening, and to facilitate the separation and withdrawal of the bowel from the abdomen, which was done to the extent of about an inch beyond the lines of demarcation, at which points it was extremely friable, and was torn, notwithstanding that the greatest care was exercised.

The intestine was divided a little beyond each extremity of the slough, and a double linen ligature was placed around the mesentery. The mesentery was divided beyond the ligature, and with it five and one-half inches of the bowel removed.

The intestinal tube was closed by a continuous stitch of linen thread (carbolized shoemaker's thread), with care that the mucous membrane was entirely enclosed, and the peritoneal coat in apposition. The ends of the thread were cut short, and left inside the intestine. The bowel was returned into the abdomen, the sac divided close to Poupart's ligament, and the wound left wide, with a rubber drainage-tube inserted into the abdomen around the ligatures. The dressing consisted of a flannel cloth wrung out of moderately hot water, applied over the wound and lower part of the abdomen, and frequently changed as the necessity required.

An opiate, weak brandy-and-water, and a moderate quantity of liquid diet were prescribed and retained.

Vomiting ceased, and her general condition improved almost immediately after the operation, which was completed about 7 P.M., and required about half an hour to perform.

September 5th.—She was in a very critical condition. Temperature, 102°; feeble, rapid pulse. She had frequent eructations by little effort of a yellowish fluid, and the abdomen was moderately distended with gases.

September 6th.—Condition about the same. Temperature, 100°. Bowels more distended, eructations less frequent, however, and she retained brandy-and-water, and lastly coffee with a little milk. As she was rather upon the improve in her general condition, I thought it best not to interfere with the tympanitis. I should have tapped the intestines if the respiration had been seriously embarrassed, but I concluded that the distended folds of intestine formed a necessary support to the wounded portion, and by adhesion tended to prevent the escape of the contents into the peritoneal cavity. She passed wind per anum on the fourth day, and a natural stool in about a week after the operation. The ligatures and long strings of mesentery and cellular tissue came away from time to time, and the wound was cleansed daily with a weak solution of carbolic acid. Her recovery was uninterrupted, and in six weeks she was doing housework.

The hernia was radically cured, and has remained so for a year. I was assisted by Drs. Maxim, McPherson, and Winters, of this city.

April 14, 1882, I was called to see Mrs. B——, aged sixty-two, of Alpine, also suffering from a femoral hernia, strangulated for four days. She was much in the same condition as the former case, though there was no evidence of decomposition upon puncture of the sac. The hernia could not be reduced. An incision was made, the sac isolated and opened as in the former case. It was found to contain omentum, a knuckle of intestine, and reddish serum. The intestine was not adherent, of a deep purple color, and the blood apparently coagulated in the vessels. The portion of omentum was tied and cut off, a fold of thread was passed through the mesentery, and the intestine returned into the abdomen. This was done with the view of giving the strangulated bowel an opportunity to recover, and if it did not, I hoped, by means of the thread, to withdraw it again for excision. The sac was not cut off, but left projecting above the integument, in order that the opening into the abdomen could be easily found. The operation was made at 2 P.M. An opiate was given. She passed a comfortable night, vomiting occasionally, which was attributed to the chloroform.

I was informed that she passed flatus, but upon examination for myself in the morning I observed that it came from the wound. I found, also, that it was impracticable to withdraw the intestine, on account of the swelling around the opening; nor did I make any attempt, since I thought that any shock to her system, however slight, would diminish her chances of recovery. I gently withdrew the thread and put in a drainage-tube as far as I could. She was very weak on the 15th and 16th; her treatment and condition much the same as in the former case. She was much improved on the 17th. The abdomen was very little distended, on account of the free escape of gases from the wound, which gradually ceased after a few days, and she had a natural stool about the eighth day. No fæces came from the wound that we observed. She was under the care of Dr. Coon, who resided near her, and who assisted me at the operation. Her recovery was uninterrupted from that time. Dr. Coon cut off the sac four or five days after the operation. The hernia was not cured, and a truss was applied.

In July, 1877, I removed four inches of intestine from a child fifteen months old, which was followed by recovery. The child was subject to fits of colic since its birth, and the mother stated that she had often perceived a lump in the epigastric region, which rose during the fits and passed away in the intervals. When I saw the child, a distinct roll could be felt along the left transverse and the descending colon, as far as the superior strait of the pelvis; and upon introducing the finger, a hard, fleshy substance could be felt in the upper part of the rectum, which was dilated, and the anus flabby. The child was continually straining and vomiting, and was much exhausted. I could not, by every means that I knew, reduce wholly the invaginated intestine, and the same condition would presently recur from the continued straining of the child. I then drew the extremity outside the anus, and upon examination found that the hard, fleshy tumor was an old invagination of the bowel; that the peritoneum was united above, and the enclosed sac was filled with fluid. I immediately cut it off up to the attachment, which was strong, so that no stitches were required. The bowel was returned, the invagination reduced, and, for security against a return, a pad on the left side and a bandage were applied. The child recovered without any further trouble, and was relieved of the recurring fits of colic.

¶ 35 Monroe Street.

MEDICINAL DOSES AND THEIR RELATION TO THERAPEUTICS.

By N. L. NORTH, M.D.,

BROOKLYN, N. Y.

That medicine is not yet an exact science is easily demonstrated. A cursory examination of any work on Materia Medica will indicate a lamentable lack of knowledge in regard to the precise method of action of medicinal agents, and show, as well a, general indefiniteness as to the proper amount of an individual article necessary to produce a specific result. After making due allowance for the differences of age, sex, temperament, climate, etc., there is yet apparent a want of exactness as to the dose in relation to the effect desired, which is altogether puzzling to the younger student in medicine, and distasteful and unsatisfactory to the older practitioner. The habit or custom of speaking of a particular article of the Materia Medica as a *tonic*, *stimulant*, or *sedative*, or otherwise, without reference to the quantity used, is, as it seems to me, so far misleading that it ought to be discontinued, except, perhaps, in a leading way, to designate the general character of the article in question. There can be no doubt to-day that a proper dose of a medicine may be given with remedial effects to a person suffering from a condition of system such as another dose of the same medicine may have caused. For instance—given a person in a certain condition—administer a gramme of ipecac and vomiting will result; again, to the same person, with excessive emesis, give three milligrammes of ipecac and his vomiting will cease. To another give a gramme of colocynth, and expect excessive drastic catharsis, with cramps and colic; and then to the same person, suffering from severe peristaltic action of the intestines, give five milligrammes of colocynth and relieve the pain.

Facts like these call for explanation. If we confine our thoughts to the old channel, and expect to find that each article used as a medicament will produce certain results, differing in *degree only* as we change the dose, the explanation will be difficult. It is not my purpose in this article to attempt to explain the general *modus operandi* of medicinal agents. I desire to impress the fact that different doses of the same medicine will produce widely different results, to the extent in some cases, possibly in many—especially in *reactive* doses—of results apparently antagonistic. Bear in mind the simple philosophical axiom that "action and reaction are equal and in opposite directions," and these results are easy of explanation. I am aware that just here comes in the pretended proof of the unscientific and ridiculous dogma of "similia," etc., of the homœopaths. I am not prepared to say, however, that the *indefinite* infinitesimal dose of a similar is less scientific than the *indefinite* larger dose of a dissimilar.

Three to five milligrammes of ipecac will, by a gentle tonic action, stimulate a deranged stomach into normal activity, while ten centigrammes, or even three, if assisted by a like amount of opium, as in the Dover's powder, will extend beyond the stomach and produce a sudorific action. A gramme of ipecac will produce such violent activity as to result in emesis. In precisely the same relative proportions and doses the different results attributable to colocynth may be understood.

To a lack of the proper recognition of *definiteness* in the different doses when different results are desired, may be charged the harm done by the abuse of quinine, as it is now, in many cases, so empirically and unscientifically administered. The primary effect of quinine is tonic. In moderate doses, say from three to fifty centigrammes—having reference to age, sex, condition, etc.—it is eminently tonic, producing activity in the capillaries, and creating a general tone and energy in the systemic circulation. In the above doses, repeated so often as to become cumulative, or in the larger doses of from thirty to sixty centigrammes, given less often and during the interval of an attack, it is an antiperiodic, and then in the enormous reactive doses of a gramme and a half to two grammes it is an antipyretic. It is here, in the matter of the use of quinine to reduce the temperature, more especially, that a word of caution seems to be needed looking to a reformation in the manner and time of its use, lest the folly of half a century ago of the careless resort to one medicine in almost every disease, whether rationally indicated or not, be repeated today by substituting quinine for calomel.

As the homœopathist, in the rare case of his honestly adhering to his irrational dogma of the similars and infinitesimal potencies, falls into the habit of watching symptoms, and so gives his patient an infinitesimal *like* to cure a *like*—really doing nothing—while nature cures or kills the patient, so may it not be possible that the "regular practitioner," falling into the easy habit of resorting to the thermometer, and when it indicates excess of temperature prescribing quinine, and persisting in its use, at the risk, in some cases, of harming rather than helping his patient? A special diagnosis, under such circumstances is of but little importance. A general name, as "malarial fever," or "typho-malarial fever," will do for all the diseases arising from decomposing vegetable or animal matter, and "pneumonia" for all the forms of the inflammatory affections of the lungs or bronchial passages will be quite enough to satisfy the patient and his friends, and then, how easy the routine—note the temperature, and finding it above normal prescribe *quinine indefinitely* but *persistently*. Perhaps the patient may complain of "bursting headache," or there may be complete delirium! What matter? The temperature is high—push the quinine. Finally a *reactive* dose is reached, the powers of nature yield, and the patient either dies in collapse, or gradually rallies from the prostrating effects of the disease or the medicine, or both, and by careful nourishment convalescence is established and he recovers.

The reactive or antipyretic dose of quinine is a remedy potent for good or for evil; and, like venesection, should be used with great care after careful diagnosis and with direct reference to its powerfully sedative action.

A tonic dose of quinine should never be given to reduce the temperature; it will have only the opposite effect. Again, a tonic or antiperiodic dose of quinine, as a rule, should not be given during the exacerbation of a fever.

Many diseases have symptoms in common; prescribing for symptoms, without reference to a careful diagnosis of the disease, is as dangerous as it is unscientific.

Many remedial agents produce results widely different, often antagonistic, according to the quantity given. The selection of the *dose* of a remedy is quite as important as the choice of the *remedy* itself.

Progress of Medical Science.

Rapidly Progressive Cirrhosis of the Liver.—Dr. Victor Hanot relates at length, in the *Archives Générales de Médicine* for June and July, 1882, four cases of cirrhosis of the liver in which the symptoms differed somewhat from those usually observed in this disease. The duration of the malady varied, in the different cases, from two to six months. There was in every instance an elevation of temperature from 1° to 2° C. From the commencement more or less pain was complained of in the right hypochondriac region. Ascites appeared early, sometimes even before any noticeable enlargement of the subcutaneous abdominal veins. There was also, early in the course of the disease, œdema of the inferior extremities, and even of the hands and forearms. The subicteric hue of the skin, mucous hemorrhages, and ecchymoses were much more marked than we usually find in cirrhosis, though less in degree than are seen in acute yellow atrophy. The patients emaciated rapidly, and death overtook them suffering from profound cachexia, weakening of the mental powers, sometimes going on to coma, and a subnormal temperature. At the autopsy the gross appearance of the liver was that of ordinary cirrhosis. It was small, granular, sclerosed, and of a chamois yellow color. The microscope also showed the ordinary appearances found in cirrhosis, but in addition there was seen to be a fatty degeneration of the hepatic cells. This was not a mere granulo-fatty infiltration, but most of the cells were found to have disappeared and to have been displaced by little drops of oil. In some cases a single drop was seen of nearly the size of the cell itself.

The Embryology of the Eye.—In the third article of his series on the development of the eye, published in the *New York Medical Journal and Ob-*

stetrical Review for September, 1882, Dr. William C. Ayres, of New York, considers the choroid, the ciliary body and the iris, the retina and the optic nerve, and the optic chiasm. Whereas J. Arnold has not been able to detect blood-vessels in the locality of the future choroid in embryos of 9 mm., the author has observed the whole primary ocular vesicle surrounded by a system of vessels, running at least one-fourth through the corneal tissue, or between the lens and the primary epithelium of the cornea, the ectoderm. The formation and origin of this system of blood-vessels he thinks very important, since they certainly represent the earlier stages of the choroid, and demonstrate most positively that neither the choroidal tissue nor its pigment can have any relation to the ocular vesicle. Also, since the choroidal tissue is formed from the mesodermal elements immediately around these vessels, and from them alone, the pigment epithelium of the retina can have no relation to the uveal tract except one of apposition. The development of the choroid is summed up by saying that it takes its origin from the original mesodermal tissue which surrounds the primary ocular vesicle, and is, consequently, a formation *in loco*. At first its cells are not arranged according to any order, but subsequently a distinction occurs which is completely analogous to what takes place in the cornea in the formation of its basilar membranes. The choroid and sclera are continuous in early embryonic life, but they are afterward separated, just as the anterior chamber was formed —viz., by the production of holes and meshes. In the case of the anterior chamber the process becomes complete, and a free space exists, whereas in that of the choroid it does not become so, and the peculiar loose connection which we find between the choroid and sclera results. The pigment of the choroid is of late origin, and is formed in the same way as that of the iris and ciliary body. As regards the ciliary body and the iris, in embryos of 17 mm. in length, we notice that the end of the secondary ocular vesicle is rounded off, and it is so placed that the line of separation between the two layers runs almost parallel to the optical axis. A little later than this the end becomes pointed, and the external layer lengthens out so as to present its outer surface directly to the front, whereas, before, this position was held by the tissue which joined the two layers together anteriorly. He lays much stress on this condition, or rather this peculiar step, in the development, since it is, in his opinion, the key-note to the formation of the iris. And it has been overlooked by most authors on the development of this membrane. At 33–36 mm. the pigment layer has developed so much more than the inner one that, the latter not being able to separate from the former, a loop has been produced, so that the end of the vesicle is now made up of two layers of cells, both of which have come from the outer or pigment layer of the ocular vesicle. The mistake is often made, he remarks, of supposing that the posterior chamber runs up to the pupillary margin of the iris as a free space, but this is not true, and the reason for it we see in the manner in which the iris is formed. In the case of the retina, soon after the primary ocular vesicle has been completely formed we find it projecting far out into the mesoderm, and approaching the ectoderm, at each successive stage of increase in its volume of tissue, until it has nearly reached the external layer of the head of the fœtus. This layer it never reaches, however, and there can always be seen a thin strip of tissue between it and the ectoderm. Kessler and some others insist that an actual contact occurs, but this the author has never been able to see in any one of the many specimens he has examined in regard to this special point. On the contrary, there is always the tissue just referred to between them, and this tissue, though very transparent, and capable of being stained but very slightly with any of the various coloring materials known to microscopic technology, can always be seen, on close examination, to contain cells and intercellular substance. There are many peculiarities to be noticed in the formation of the pigment, both of the retina and of the uveal tract. Some authors contend that they come from the same source, and Dr. Ayres thinks that perhaps they do, but not in the sense those authors seem to set forth. The retinal pigment is to be found at an early stage, even before the two layers of the secondary ocular vesicle have come in contact with one another. It always occurs in the shape of dark-brown points, so to speak, and always on the inner part of the outer wall of the secondary vesicle, where it remains situated in a closed cavity produced by the two walls of this vesicle. These walls never become broken at any point so as to admit of this pigment "*wandering*" from its original place of formation, and, consequently, it can never be concerned in the production of any portion of the eye where the retina does not play a part. The development of the fovea centralis is considered to be still a matter of great uncertainty.

TREATMENT OF ASCARIDES LUMBRICOIDES. — Dr. Guermonprez sums up a long article on lumbricoides thus:—1. Worm-seed (whose action is not to be confused with that of santonin) is by far the best medicament for killing as well as expelling round-worms. 2. Santonin does not kill the worms outright, it excites them to livelier movements, and these may reflexly stimulate the intestine so as to expel them; but they may also only exaggerate the evil if there is obstruction. 3. Santonin is, therefore, by no means always to be chosen. It does no harm if the worms are young and not numerous; if they are mature and many it may be dangerous even in reasonable doses. 4. The purgatives usually given with vermifuges probably do more than the latter to cause expulsion of the worms; simple evacuants will often suffice. 5. Ordinary hygienic means directed to overcoming the lymphatic cachexia of the patient, or simple change of food and abode, may at times be enough to rid him of the worms without any medicine whatever. 6. Hence our treatment should not be the mere routine administration of santonin, but should be determined by the circumstances of the case. Change of air, and of diet, and simple evacuation, are not to be forgotten.—*The Practitioner* (London), September, 1882.

THE ACTION OF CALOMEL ON FERMENTATION AND ON THE LIFE OF MICRO-ORGANISMS.—A paper with this heading appears in the last number of Hoppe-Seyler's *Zeitschrift für Physiologische Chemie*, by N. P. Wassilieff, who, after noting the high estimation in which calomel has been always held in disordered conditions of the bowels, especially in children, points out the absence, with one or two exceptions, of any experiments to show or explain the cause of its influence. Voit, indeed, as long ago as 1857, observed that albumen and blood mingled with calomel were capable of being kept for days without any indication of putrefaction, and Hoppe-Seyler

made some similar observations; but besides these, few, if any, researches have been made on its action. In M. Wassilieff's experiments, calomel was added to the fluid obtained by acting on albumen with gastric juice, and to that obtained by acting on albumen with pancreatic juice; and he satisfied himself that the albumen-digesting ferment of both these fluids was not damaged by calomel—peptones in the one instance, and leucin and tyrosin in the other, appearing as usual:—but that the presence of this substance prevented the formation of the secondary products, such as indol and phenol. Neither hydrogen nor hydrogen sulphide formed in the fluids containing calomel, whilst they were abundantly produced in the others. In like manner, the author experimented on the effects of calomel on the fat-digesting and the amylolytic ferments of the pancreas, and found that it had no modifying influence upon them, but that it arrested the changes which followed their completion, entirely preventing, for example, the butyric acid fermentation and putrefactive processes. He hence arrives at the conclusion that calomel acts differently on the formed or organized and the unformed or unorganized ferments, permitting the action of the former to proceed unchecked, but completely preventing the action of the latter.—*The Practitioner* (London), September, 1882.

PARALYSIS RESULTING FROM INJECTIONS OF ETHER.—In an article on this subject in the *Journal de Médecine de Bordeaux*, of June 25, 1882, Dr. Arnozan details a number of cases, from which he draws the following conclusions:

1. Injection of ether into muscles produces paralysis of these organs.

2. These paralyses bear a marked analogy to certain peripheral paralyses, as, for instance, of the facial nerve. There is suppression or diminution of faradic excitability, augmentation of galvanic excitability (reaction of degeneration), and return of voluntary movement before that of faradic excitability.

3. Such paralyses are cured spontaneously, but slowly. Their cure by the application of galvanic currents is much more rapid. A number of questionable points remain to be determined. Does ether cause these paralyses by acting upon the nerves or upon the muscles? It seems from clinical analogy that the nerves are involved; but on the other hand, how is it that ether injected without particular reference to this point should have invariably come in contact with the nerve-trunks? Must some lesion of the nervous terminations be admitted? These are questions which experimentation upon animals and microscopical observation alone can solve.

CONGENITAL INTESTINAL OBSTRUCTION. — Mr. A. Pearce Gould relates a case of congenital intestinal obstruction. A. B——, a female, aged three days, was brought to Westminster Hospital on August 5, 1881, because, in spite of several doses of castor-oil, it had not passed any meconium or motion. It had vomited several times. The child was thin, but showed no outward deformity. The anus was normal, and the last joint of the little finger could be passed into the rectum, which appeared to be closed over above it. No fulness or tumor to be felt in the pelvis per rectum. A catheter and probe were each stopped about one inch from anus. Belly distended, its walls œdematous; a little ascites. At 1 A.M., August 6th, Mr. Gould opened the belly above left Poupart's ligament. A coil of distended small intestine presented, and no coil of large intestine could be brought into the wound. So the former was carefully stitched to the edges of the incision and then opened, and a large quantity of meconium escaped. The child died twenty-one hours afterward. At the autopsy no trace of peritonitis was found. The cæcum and lower four inches of ileum, and four inches of colon, were filled with a firm, whitish substance of the consistence of cheese, firmly applied to, but not united with, the mucus membrane. In the colon beyond this plug were found several masses of milk-white, firm mucus. Below this the colon and rectum were empty, and firmly contracted to the size of a clay tobacco-pipe stem. Above it the small intestine was distended with meconium and gas. It was pointed out that there was here no fault in development, but obstruction from a plug. From the white color of this plug it was assumed that it was deposited by the third month of fœtal life, as bile passes into the duodenum at that time. Mr. Gould also insisted on the advantage of opening the belly in the groin in all cases of congenital intestinal obstruction, in preference to lumbar colotomy, which would have been impossible in this case. The obstructing mass was formed of inspissated mucus, which showed that in that case the glands of the large intestine must have acted some time before birth.—*The Practitioner* (London), September, 1882.

ERYSIPELAS PROPAGATED THROUGHOUT THE DIGESTIVE TUBE.—In *La France Médicale*, M. Rendu reports a unique case of erysipelas contracted through contagion, and spreading through the entire alimentary canal. The disease originated at the site of a scratched acne pimple on the left cheek.

As regards the buccal cavity there was from the beginning no doubt as to the character of the trouble. The progressive swelling of the lips and tongue, together with the dysphagia and angina, indicated the propagation of the cutaneous dermatitis, which upon the mucous membrane of the cheeks and lips presented identically the same characteristics as upon the skin. The next day, nausea and vomiting indicated that the stomach was effected; the following day symptoms of a violent enteritis predominated, viz.: excessive tympanitis, colic, and profuse and fetid diarrhœa. This tympanitis and diarrhœa persisted, with alarming intensity, for five days, and did not begin to decrease until the end of a week. It was then that sharp pains, perineal swelling, and all the symptoms of a phlegmon appeared. In three or four days an abscess accordingly formed at the margin of the anus. Considering this in connection with the appearance later of a submental cervical abscess, the author concluded that intestinal erysipelas had existed.

ALCOHOLISM AND STRYCHNIA.—According to M. Luton, of Rheims (*Bulletin de Thérapeutique*), one may observe in alcoholics a veritable excito-motor inertia of the spinal cord, capable of lessening the generally so marked effects of strychnia. Thus in individuals suffering from acute alcoholism, this drug may and must be given in large doses to insure success. While in some cases three centigrammes of the sulphate of strychnia, injected by demi-centigrammes in the course of a day, suffice to relieve an attack of delirium tremens, in other instances more will be required. To an individual affected with delirium tremens symptomatic of a varioloid, M. Luton has given hypodermically in fifteen hours seven centi-

grammes of strychnia sulphate, with real benefit and without accidents of strychnism. M. Luton is of the opinion that in the alcoholic, because of an acquired tolerance, there is no absolute limit to the employment of strychnia. The principal point is to divide the dose so as not to inject more than a centigramme at a time. An interval of two hours suffices to exhaust the primitive or dangerous effects of the poison. It is necessary also to watch the patient closely, and to stop the remedy as soon as the delirium has ceased, and sleep has appeared; for from this time on inertia of the cord no longer exists, and the cumulative effects of the drug might otherwise suddenly manifest themselves.

Treatment of Galactorrhœa and Incipient Mastitis by Strapping.—Dr. E. Schwarz (*Centralblatt für Gynäkologie*, July 1, 1882) reports the cure by strapping of a case of galactorrhœa which had resisted all the commoner modes of treatment. The patient had originally suffered from a suppurative mastitis. The abscess had been opened and iodoform applied. The abscess proper healed readily, but the incisions failed to do so. They, as well as the nipple, discharged milk in considerable quantity. The volume of the breast was increased, and there was moderate tenderness. Anæmia supervened, and the health of the patient was depreciated to an alarming extent. The author finally hit upon the expedient of lessening the blood supply to the affected breast by strapping. By this means he hoped to diminish the hypersecretion. After washing and drying the breast, strapping was applied as follows: Two strips were applied to the tip of the mamma, above and below the nipple, in such a manner as to leave the latter, and a small horizontal ellipse around it, uncovered. The strips thus formed an elliptical figure. Their extremities ended on the sides of the mamma, that of the lower one above, and *vice versa*. A second ellipse was then applied, overlapping the first to one-half its width. Six or seven of these were applied, of which the last embraced the base of the breast, its ends terminating on the skin of the thorax. Finally, the nipple itself, with the surrounding small space, was covered. Every point of the mamma, above and below, was thus covered by a double layer of strapping, and at the crossings on the sides by more than two layers. Almost immediately after the application, the breast had diminished in size, from the tightness of the strapping. There was no pain during the time occupied in putting on the plaster, or thereafter. By the next day only a few drops of milk had appeared through the strapping. The mamma had become so diminished in size that a new application became necessary, followed by a third, two days later. Three more applications sufficed to bring about the cure of the dermatitis, arrest the hypersecretion, and close the fistulæ. The affected breast now was less in volume than the other. Other procedures had been abandoned on application of the first strapping. In a case of incipient mastitis mentioned, the author, after resorting to others without success, employed the above procedures; but in addition suspending the breasts by two long strips passing over the shoulder. The operation caused no additional pain, but, on the contrary, pain entirely ceased after the lapse of half an hour. A cure resulted after the two additional applications at intervals of two days. In a third case a threatening abscess was aborted. Schwarz draws attention to these points: That the strapping must be carefully applied as described; that the plaster must adhere well; that a constant equable pressure must be exerted, and that the strapping must be renewed when it becomes loose, this generally occurring daily at first.

Large Pancreatic Cyst—Laparotomy—Death.—In the *Wiener Medicinische Presse*, No. 45, an interesting case of cyst of the pancreas is described. The patient, a woman, aged thirty-six, was received into a Vienna hospital, and on examination the abdomen was found to be unequally distended by a tumor. The latter extended two handbreadths above the umbilicus, was tolerably movable, exhibited indistinct fluctuation, and reached down as far as the true pelvis. The growth had originated in the upper abdominal region nearly three years before; it had grown steadily and been mistaken for an ovarian cyst. On February 27, 1881, Rokitansky performed extirpation. After incision of the linea alba to the extent of nine inches, a quantity of ascitic fluid escaped. The tumor was adherent anteriorly with the large omentum and the posterior wall of the stomach, and behind with the transverse and descending colon. In the separation of the transverse colon, the intestine was torn to the extent of nearly one inch; the rent was immediately closed with five sutures. Fifty ligatures were necessary to arrest the hemorrhage from severed adhesions. Separation of the omentum caused a laceration of the cyst and a partial discharge of its fluid into the abdominal cavity. After dilatation of the opening, five quarts more of a brownish-red fluid escaped. At the end of a two hours' operation, the patient was so collapsed that a total extirpation was out of the question, on account of remaining extensive adhesions. The part of the tumor which had been freed from its connections was subsequently encircled by Chassaignac's écraseur, the chain was fixed by a Péan's clamp, and the growth removed above the chain. The stump was then fastened to the upper angle of the wound. Soon after the operation meteorism and offensive discharge from the abdominal cavity set in, necessitating the introduction of a drainage tube, through which the abdomen was washed with a one-half per cent. carbolic solution; the sac of the cyst was similarly treated on the next day. On the sixth day fecal masses escaped from the tube and alongside of it; on March 9th death supervened. The autopsy revealed purulent peritonitis, and on the posterior wall of the remainder of the sac a group of long, shaggy, discolored, and very soft excrescences about the size of a dove's egg. The other walls were pretty smooth, only thickened in parts by low protuberances. This part of the cyst was connected with the pancreas in the following manner: The head of the organ was distinctly demonstrable, but the body was intimately adherent to the posterior surface of the cyst as a thin layer one-twelfth of an inch in thickness; further to the left it gradually emerged into it so that the tail of the organ was wanting. Injection of the pancreatic duct showed it to be extant in the head and body; numerous branches could be filled with the injection where there was no parenchyma in the cyst wall. The cyst fluid was dark red, turbid, alkaline, and contained a large quantity of granular masses of lighter shade; its specific gravity was 1.014, and some of its ingredients were hæmoglobine, serumalbumen, serumglobin, inorganic salt, cholesterin, and paralbumin.

A Marble Bust of Virchow has just been completed for his Pathological Institute.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, October 14, 1882.

HIGH-PRESSURE EDUCATION.

In a recent issue of the *New York Herald* appears a suggestive letter from a school-girl who is a victim of the prevalent high-pressure system in our public schools. By way of a prelude to some remarks which seem to be called for on the general subject of education of the rising generation, we cannot, perhaps, get more directly at the points at issue than by making several quotations from the communication in question. In the first place, here is the enumeration of the daily routine: "My studies are arithmetic, algebra, geography, astronomy, grammar, United States history, general history, etymology, spelling, and composition; then drawing, reading, writing, and singing by note. Every little while I am obliged to have an account of some celebrated person or place learned well enough to write on a slate."

The manner in which the necessary amount of mental labor is performed to master the many different tasks assigned gives the clue to the nervous strain which almost invariably follows. If the public understood it as well as the profession, the absurdity of the system would need no reproof. That such things are allowed to go on under the sanction of what has been generally considered the best school system in the world, proves quite conclusively that arguments against it are still in order, and that the profession has a duty to perform in the premises which must be persistently and conscientiously performed. But we have this account of the method and amount of study necessary to the end to be attained, and it is fair to suppose that it may be the experience of hundreds of young girls in a like situation:

"After spending a long, wearisome day in a close school-room, trembling every minute for fear I shall forget some date in history or rule in algebra, I walk home, a distance of three short blocks—the only exercise I have except at lunch time, with a short recess in the forenoon in a crowded school-yard. As soon as I arrive at home I sit down to work out my number of algebra problems, which I would not mind if I wasn't so nervous and tired. After that comes my spelling, twenty review words of former grades, and twenty historical, geographical, or astronomical names, which take quite a long time to hunt up in their respective text-books. Then next in the order of exercises is a long history lesson, with such lists of names and dates that it makes my head swim to look at them. I study the civil war, together with the explorations and early settlements. By the time I lay down my book to have supper my head feels as if it would burst. I hastily swallow my food, thinking all the time of how much more I must jam in somehow before I can rest. I hurry to two chapters of geography, and while studying them think, 'O dear! I don't half know that history yet!' and I have got astronomy and an account of Solyman to find in an encyclopædia, history, or elsewhere, besides preparing the definitions of a reading lesson, with the notes about the author. I study and search in histories and text-books until I am about worn out. I do not dislike study, but object to being obliged to work until twelve o'clock every night."

When we consider that the pupil, like others of her class, is probably a young girl in her teens, passing through those physical changes which are necessary to her future development, when mind and body should be subjected to the minimum amount of strain, no words can express the abhorrence of a system which is so utterly in defiance of all the well-recognized laws of health.

It has often been said that the tendency of American methods is toward one extreme or the other. Our public schools can within bounds be admirably managed, but the commissioners seem to be carried away with the insane idea that no amount of mental work which can be forced upon the already overburdened scholar can do any harm. The fact that some may struggle up to the required standard seems to be a sufficient reason why all must. If half the parents had a proper idea of the actual daily mental work that is expected of their children, they would possibly be more than astonished to think how one small head could hold it all. At the bottom of this pernicious system of crowding is the desire of making the best show of work on the part of the teachers, who are oftentimes strained as badly as their scholars. Each teacher must maintain a certain percentage of well-drilled scholars under penalty of discharge or reduction in her own grade. The consequence of all this is easily seen in both the worn-out teacher and overburdened scholar, and these are to be found in large numbers in every public school in this city. But reform can only fol-

low the creation of a proper public opinion on the subject, and to such an end our efforts must constantly tend, and so we must never tire in repeating an old story, until the time may come to be heard.

A THEORY OF FEVER.

It has been quite positively determined that in fever there is an increase in the consumption of oxygen and in the elimination of carbonic acid gas, which increase corresponds with a more active tissue-change.

The cause of this febrile activity has been attributed to certain ferments or to micro-organisms. These are supposed to float in the blood, and to be carried to the various tissues which they excite into greater metabolic changes.

No theory of fever can be thought complete, however, unless it takes into account the influence of the nervous system. That there is a definite, localized thermic centre in the brain or lower ganglia, must still be doubted, but that there are nerves which influence animal temperature is very well proved. The great source of heat is the muscles, which probably produce at least seven-eighths of the whole. It must be efferent nerves running to muscles, therefore, which chiefly carry the influences regulating heat-production in animals.

Professor M. Zuntz has advanced the hypothesis that in fever there is an excitation of these nerves, and that it is through this means that high temperatures are produced. The tired, aching feeling of fever patients, the rapid waste of muscular tissue, the muscular tremors of initiatory chills are instanced in support of such a view. But the author has, in addition, made some highly ingenious experiments to test its correctness.

He curarized rabbits so as to paralyze the motor nerves, and presumably all the efferent nerves going to muscles. The animals were kept at a fixed temperature by placing them in a bath. Artificial respiration was performed. The amount of oxygen consumed and of carbonic acid gas excreted were measured. Injections of hay-infusion or of septic blood were then made, and the gas exchange again measured. It was found that there was no increase in any instance. There was, therefore, no increase in the tissue change, and it was inferred that this was due to the paralysis of the thermic nerves (which necessarily act by increasing tissue change) by curare. Control experiments were performed, which showed that the injection fluids used produced fever with all the attendant phenomena in other rabbits.

Professor Zuntz admits the incompleteness of the proofs of his theory. He might, perhaps, have found much confirmatory evidence of the nerve-hypothesis of fever in American literature, if he had been better informed regarding it. Few are disposed to doubt that the nervous system plays an important part in febrile phenomena. Zuntz's hypothesis, however, is incomplete in that it ignores the influence of nerves in producing a peripheral tetanus of the blood-vessels, and thus lessening radiation of heat.

SLAUGHTER-HOUSE EXAMINATIONS.

The importance of facts to be obtained by a careful and systematic examination of animals slaughtered for food has hardly been recognized in this country. Reports of such examinations made in other countries have frequently been found to contain most valuable information. In particular, the city of Augsburg may be instanced. For some years the investigations of Inspector Adam have been widely quoted by Flemming and others. Recently the *Journal of Comparative Medicine* gives some important data obtained from the same source. Among 66,731 animals brought to market in the year 1881, there were 12,269 cattle, of which 246, or 2.01 per cent., were found tuberculous. This ratio is much smaller than is generally supposed to exist among American cattle. But further, the amount of tuberculosis varied greatly, and in most cases was not extensive enough to injure seriously the quality of the meat. In fact, only eighteen animals out of the two hundred and forty-six were condemned as unfit for food. The tubercles were confined to the lung in 142 cases, to the pleura in 37 cases, to the lungs and pleura in 68 cases. In 59 cases there were also tubercles in the liver.

Thus the important fact is brought out that in no case were tubercles found in parts of the body (except the liver) used as food.

Further facts bearing upon the infectiousness of the milk of tuberculous cows are given. Among 24,901 calves killed, when under the age of four weeks, no tubercles were found. Now, about five hundred of these must have been sucking the milk of tuberculous mothers, yet with apparently no injurious effect. And furthermore, the age of the tuberculous cattle was, with the exception of twenty-three, over three years. The conclusion is, that cattle, at least, are not infected in the ordinary sense, with tuberculosis by feeding upon the milk from diseased mothers.

THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.

At a meeting of the Société Médicale des Hôpitaux, June 9th, M. Ferrand presented the candidate's thesis of Professor Desplat, of Lille, upon the comparative action of carbolic acid and salicylate of soda. The views presented were that the above drugs were excellent antipyretic and antialgesic agents—sure, rapid, and permanent in their action, but, at the same time, easily eliminated, and, therefore, but slightly dangerous. Except in acute rheumatism, M. Desplats did not find any marked difference in their action.

The discussion which ensued turned upon the use of carbolic acid in typhoid fever. Thirteen members took part and related their experience. Three or four did not commit themselves; the remainder agreed in saying that the drug in question, used as recommended, had a dangerous tendency to depress the system, and to produce pulmonary congestion, exhausting sweats, and albuminuria or polyuria.

It was unanimously voted that the use of carbolic acid in typhoid fever, when given as recommended (in half-gramme or gramme doses by enema twice a day), was dangerous, and without effect upon the course of the fever.

Dr. Ramonet, Physician-in-Chief at the Military Hospital of Boghar, in Algeria, has contributed an article upon the use of carbolic acid in typhoid fever, expressing directly contrary views to the above. He is a follower of Desplat, except that he uses smaller doses, generally not more than two grammes per diem, by injection. The effect, he says, is to lower the temperature nearly 4° F., and to produce a most favorable change in the progress and symptoms. He has treated forty-one cases, with a mortality of only two, or 4.9 per cent. The average mortality from this disease in the army is twenty-one per cent.

On August 22d, at the Academy of Medicine, M. Vulpian read a paper upon the use of salicylic acid in typhoid fever. M. Vulpian based his therapeutics upon the theory that there is a *bacillus* of enteric fever in the intestine, and that this *bacillus* ought to be ferreted out and killed with an antizymotic. Having tried iodoform, boric acid, phenate of soda, and salicylate of bismuth with no effect, he finally settled upon salicylic acid. This in daily doses of two or three grammes was ineffective, but in doses of six or seven grammes daily (gr. xl. to gr. l. every two hours!) most satisfactory results were obtained in a lowering of the fever and a general amelioration of symptoms. M. Vulpian concluded that this drug, without being curative, had an undoubted modifying influence upon typhoid fever. He thought also that salicylic acid taken by the mouth might act as a prophylactic. The discussion which followed brought out very little. It was only evident that M. Vulpian's views were theoretical, and that the clinical tests of his reputed remedy were not at all conclusive. Salicylic acid has been tried in Germany and America with no very good results, as yet reported.

THE HEALTH OF LONDON.—The death-rate of London during the two summer months reached the extraordinarily low figure of 13.45 per 1,000. That the city is less healthy in winter we might infer from the statement that the weight of the soot hanging over London on a winter's day is fifty tons, while that of the carbon dioxide is two hundred and fifty tons.

Reviews and Notices of Books.

THE MULTUM IN PARVO REFERENCE AND DOSE BOOK. By C. HENRI LEONARD, M.A., M.D. Detroit: The Illustrated Medical Journal Co., 1882.

THIS appears to be a useful little work, containing, along with the usual list of things for reference, the doses of the latest remedies and preparations.

LABOR AMONG PRIMITIVE PEOPLES, showing the Development of the Obstetric Science of the Day, from the Natural and Instinctive Customs of all Races, Civilized and Savage, Past and Present. By GEORGE J. ENGELMANN, A.M., M.D. Fifty-six Illustrations. St. Louis: J. H. Chambers & Co., 1882.

WE can hardly praise too highly Dr. Engelmann's interesting work, which is a contribution both to anthropology and obstetrics. The author describes what he announces on the title-page; but he also supplements his descriptions with many cuts, which greatly add to the interest and intelligibility of his subject. We have no space to review the conclusions made, although they are novel, and will doubtless excite enough debate. Dr. Engelmann thinks that the modern dorsal decubitus is unphysiological and bad. He recommends the semi-recumbent posture, along with more liberty of movement to the parturient woman.

TWO HARD CASES. Sketches from a Physician's Portfolio. By W. W. GODDING, M.D. Boston: Houghton, Mifflin & Co., 1882.

IN this little book, Dr. Godding establishes his reputation as a graceful and pleasing writer, if not as a psychological expert. The first "Hard Case" is a patient which the author had under treatment for some time. There is a pathos in the story and a simplicity and charm in the way it is told, which should rank it as a classic.

The second "Hard Case" is Guiteau, of whom we venture to think that enough has been said.

THE HUMAN BRAIN, Histological and Coarse Methods of Research. A Manual for Students and Asylum Medical Officers. By W. BEVAN LEWIS, L.R.C.P. (Lond.). London: J. & A. Churchill, 1882.

THIS book presents a concise summary of methods of examination of the nervous centres. It contains much that may be found elsewhere; but, on the whole, supplies a want, and will be found very useful. Dr. Lewis is clear and accurate in his descriptions, which are accompanied with good illustrations. Several new methods of examination are given.

TRACHEAL MUSIC.—The French journals, under the title of a "curious phenomenon," describe a flageolet player who charmed all his hearers by his musical performances at the recent fair held at Neuilly, near Paris. He had formerly suffered from an attack of diphtheria. Tracheotomy was performed, and the silver tube which was introduced at the time of the operation, and kept stationary by means of a circular pad, now serves the musician of Neuilly as a natural aperture through which he breathes, and so successfully that his flageolet playing was enthusiastically applauded by all present.—*British Medical Journal.*

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 5, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE Librarian, Dr. E. D. Hudson, Jr., reported that since the last stated meeting 1,429 bound volumes and 2,966 medical journals had been donated to the library.

The Statistical Secretary, Dr. F. V. White, reported the death of Dr. J. B. Reynolds, and Dr. Clements, one of the founders of the Academy.

DR. E. G. JANEWAY, then read a paper entitled,

CASES BEARING ON DIAGNOSIS AND LOCALIZATION OF CEREBRAL DISEASE AND THEIR DIFFICULTIES,

in which he directed attention especially to some of the difficulties encountered in making a differential diagnosis between cerebral and general diseases. A second group of cases was reported with reference to the general question of localization of cerebral lesions.

Of general diseases, fevers, more particularly typhus, might easily be mistaken for cerebral disease, on account of its marked cerebral symptoms, petechial eruption, etc. A case was cited, and, besides illustrating the difficulties of making a diagnosis, it showed the importance of investigating with reference to the patient's surroundings, hygienic and otherwise. The *duration* of the disease he regarded as an important point, and if it should be found that this had been from twelve to fourteen days, the probabilities were decidedly in favor of typhus fever in the very doubtful cases.

Acute ulcerative endocarditis might resemble both typhus fever and cerebral disease; for emboli from the cardiac lesion might give rise to petechial spots and also to brain symptoms. Should definite paralysis or aphasia be developed, suspicion should at once be awakened and careful examination made with reference to the existence of cardiac disease. An illustrative case was reported.

Malarial diseases were not often mistaken for cerebral disease, although the converse was not true, for tumor of the brain, abscess, or lepto-meningitis might be attended by symptoms, such as periodicity in the occurrence of certain phenomena, which made the whole clinical history closely resemble that of different malarial fevers. Illustrative cases were given.

Pneumonia and pleurisy had been mistaken for cerebral disease, the former especially, and very commonly in children. This arose chiefly from the occurrence of convulsions, one or more at the outset, headache, rigidity of the muscles of the neck, irregularity in the febrile movement, etc. In all cases symptoms referable to the chest should be carefully watched and thorough physical examination made repeatedly.

Bright's disease of the kidneys, more especially of the contracted variety, was liable to be mistaken for cerebral disease. Illustrative cases were given. One case was reported which illustrated the great difficulties sometimes encountered in making a diagnosis, and when made it was not sustained by the autopsy. A lad, sixteen years of age, wild with delirium, was admitted to Bellevue Hospital. He had had two convulsions; one several months previous to, and the other ten days before admission, and he had been treated for "kidney trouble." There were pain in the muscles upon pressure, marked rigidity of the muscles at the back of the neck, contracted pupils, marked choked disk in both eyes, good hearing, no evidence of paralysis, urine retained, not suppressed, Cheyne-Stokes respiration, and death. Diagnosis of basilar or cerebral meningitis was made. At the autopsy the spinal cord was found to be normal, and also the brain, except one of the lateral ventricles, which contained a clot three inches long, two wide, and one thick, due to rupture of a miliary aneurism in the wall of the ventricle, and there was also double hydronephrosis.

With reference to the question of *localization of cerebral disease*, we were obliged to decide, in the first place, whether probably the disease produces the symptoms, or whether they are due partly to the irritation or the softening secondary to the cerebral lesion, such as tumor, etc. Several cases were then reported which illustrated the difficulties liable to be encountered, and, at the same time, showed that localization of lesion could, in a certain proportion of cases at least, be definitely determined.

DR. E. C. SEGUIN opened the discussion and said that to him Dr. Janeway's paper had been very instructive, more particularly that part which dealt with the difficulties in making a differential diagnosis between general diseases, accompanied by well-marked nervous symptoms, and ordinary cerebral disease; for in many of these cases there was extreme difficulty in reaching a correct conclusion, and especially when the question of the existence of renal disease was involved. In those cases he regarded it as sometimes impossible to avoid the double diagnosis of kidney affection and cerebral symptoms due to miliary aneurisms.

ETIOLOGY OF CEREBRAL HEMORRHAGE.

He had been particularly interested in the case of the young man reported by Dr. Janeway, for it suggested the change of view which had occurred concerning the etiology of cerebral hemorrhage. The time was when it was held that the chief lesion which gave rise to cerebral hemorrhage was atheromatous degeneration of the arteries, whereas it depended, as many at the present time believed, upon a more extensive or more organic degeneration, accompanied by the formation of these miliary aneurisms, and such degeneration might be present in youth as well as in the middle period of life. The more recent view explained many cases which heretofore had been looked upon as irregularities or anomalies. He also believed that further investigation would demonstrate that the symptoms now attributed to that great delusion known as *cerebral hyperæmia*, could be satisfactorily explained by the existence of the general degenerative changes which were accompanied by these lesions in the cerebral blood-vessels. He had been a strong supporter of the doctrine of cerebral localization, and was interested in the fact that the cases reported by Dr. Janeway showed that he also was favorable to the belief that a probable diagnosis of location of lesion could be made.

DR. J. C. DALTON thought that papers such as Dr. Janeway's, which told us something of the difficulties surrounding the subject of localization, were desirable just now, rather than cases which

point definitely to coincidences between the loss or disturbance of particular functions and the injury or destruction of particular parts of the brain. Cases of the latter variety were extremely satisfactory and entertaining in a great many ways. When he recollected the great anticipations which were offered at the time the doctrine of cerebral localization was first brought forward by Broca, afterward supported by the brilliant physiological experiments of Hitzig, and followed by remarkable pathological corroborations, as well as further evidence from physiologists, it seemed as though a new era had commenced in the study of the brain, and that ultimately the brain would be mapped out as definitely as it had already been done by the phrenologists for another purpose. For a number of years the anticipation seemed to be a just one, and success attended the labors of different observers. At the same time difficulties began to show themselves, and they were such as could not be ignored. Many cases had been collected from experimental physiologists and pathologists, in which particular portions of the brain had been found diseased or destroyed, corresponding precisely with the loss or disturbance of the functions over which these affected portions had been supposed to preside. There were also many cases, as doubtless pathologists would agree, of just the opposite character; cases in which symptoms pointed toward lesions in certain regions of the brain, but autopsy proved that they were not there but elsewhere, or perhaps absent entirely. He did not for a moment imagine that there was any contradiction between physiological and pathological facts; there were only difficulties, and these difficulties would, he had no doubt, be the source of more valuable and certain information when the subject was more fully understood. The first difficulty which presented itself to the experimental physiologist was the extraordinary fact that when a part of the motor tract of the brain was cut out, and muscular paralysis produced upon the opposite side of the body, the muscular paralysis was not permanent. The fact, of course, must be explained, and the question was, How shall it be accounted for? Many explanations had been offered, but perhaps the clumsiest of all was that other parts of the brain took the function; at least it was unsatisfactory. One of the most striking results of physiological experiment was the loss of vision following destruction of the gyrus angularis, but here also the loss was not permanent. The most ingenious explanation which had been offered was that by Munk, who said that after removal of the angular convolution the loss of vision that followed was only apparent; that the animal saw but did not understand; that finally it came to understand, and then gave evidence that it saw objects placed before the eye. Dr. Dalton thought that although the explanation was ingenious, it was somewhat in deep water. He then referred somewhat in detail to the experiments made by Goltz, and concluded that the book required a second reading, in order that the reader might be certain that he fully understood the author's conclusions, and also to convince himself that the author had always made correct conclusions from his own premises.

The discussion was continued by Dr. W. R. Birdsall, referring to two cases of tumor of the brain, which he believed sustained the doctrine of localization, and by Dr. H. Knapp, who was asked to speak particularly concerning optic-neuritis as an aid in diagnosis. He said that his knowledge of the subject was too fragmentary to warrant him entering into the general discussion. As to the value of optic neuritis as a guide in diagnosis of cerebral disease, his opinion concurred with a statement which Huguénin had made lately, namely, that disturbances of functions in the nerves of special sense do not assist us in cerebral localizations, as many morbid processes in different parts of the brain, for instance almost all tumors, cause a diffuse chronic inflammation at the base of the cranium, which is propagated to the nerves. Dr. Knapp remembered cases where under symptoms of cerebral irritation double optic neuritis was visible, with total blindness and deafness on both sides—the senses of smell and taste were not sufficiently examined—hearing was restored on both sides, but the vision only on one, although both optic disks, after the auroretinitis had passed, showed the same appearance of atrophy. These differences might possibly be accounted for by assuming different degrees of intensity in the inflammation of different nerves, perhaps also by the peculiar structure of the intraocular end of the optic nerve at the tamnia cribrosa, where, perhaps, a slight increase of pressure might produce a strangulation permanently deleterious to the nerve-fibres, where, by a little less pressure the strangulation might do only temporary injury.

The discussion was closed by Dr. Janeway, who referred to additional cases illustrative of points brought out by those who had spoken on the subject.

The Academy then adjourned.

NEW YORK SOCIETY OF GERMAN PHYSICIANS.

OBSCURE ABDOMINAL TUMOR.

Dr. Meyer exhibited a patient, aged fifty-five, and gave the following account of his case: Many years ago he had had intermittent fever. Two years since he had temporarily suffered from pains in the back. About six months ago he had a first attack of hæmaturia, and since then seven attacks of a similar kind. His weight had rapidly decreased fifty pounds.

The only physical sign of disease was a smooth, rounded mass projecting beneath the left hypochondriac region. The question was, did this correspond to an enlarged spleen or a tumor of the left kidney. He thought that it was most probably a primary malignant neoplasm of the kidney. In establishing a differential diagnosis in cases of this kind, it became important to determine the exact position of the descending colon. If the latter were found to overlie the tumor, splenic enlargement might be excluded.

Dr. Jacobi said that the growth, doubtless, involved the kidney, and was either a sarcoma or cancer, most probably the latter. The system seemed to be more tolerant of sarcoma than cancer, the former but rarely leading to hæmaturia. He did not consider the position of the descending colon a matter of practical importance, since it was commonly either adherent or compressed, and could scarcely be inflated.

TROPHO-NEUROSIS OF HAND.

Dr. Seessel exhibited a patient who had undergone an operation for fungoid disease of the metacarpus some eight months previously. When the incisions had healed, the muscles of the forearm became atrophied, the pharyngeal joints began to

swell and grow rigid, the finger-nails underwent discoloration, and fetid hyperedrosis, principally of the palm of the hand, was developed. These trophic disturbances were not to be regarded as of vaso-motor origin. Similar changes might be induced artificially. In this connection he referred to the following facts: 1, peripheral hyperæmia resulted from section of the sympathetic; 2, stimulation of this nerve, on the other hand, produced anæmia; 3, tropho-neurotic changes could be artificially produced by irritation of the sympathetic in fasting animals. Similar phenomena had long since been observed by oculists.

Dr. Knapp, referring to neuro-paralytic ophthalmia, remarked that it was not directly due to tissue metamorphosis, but resulted from irritation.

Dr. Gerster said that trophic disturbances had been repeatedly witnessed after exsection of the elbow-joint, leaving a powerless limb, which could not be restored to functional activity by the usual methods of massage and faradization. It was for this reason that König, of Göttingen, had in some such cases advised and practised amputation in place of exsection.

Dr. Rudisch had seen a large number of cases of muscular atrophy, of rheumatic or traumatic origin, at the German Dispensary. Active local treatment had very often resulted in complete restitution of function, or at least considerable improvement. In his opinion there was a local or peripheral, and not a central cause for the atrophy in such instances.

MYELOID SARCOMA OF HUMERUS.

Dr. Gerster presented a specimen of the above, with the following history: A young man sustained a fracture of the external condyles of the humerus. This he had treated by external applications without medical advice. After some time he noticed an articular swelling, and thereupon applied for treatment. A peculiar kind of crepitation was discovered, and floating bodies were presumed to exist in the joint. During the course of the operation the true nature of the disease was revealed, and the limb accordingly removed by amputation.

BURSAL CYST OVER THE TUBEROSITY OF THE ISCHIUM.

Dr. Gerster also presented a specimen of a cyst removed from the buttock of a man. The sac was about the size of a child's fist. It had started from an inflammatory proliferation of the bursa over the tuberosity of the ischium. Owing to the thick layer of subcutaneous fat in this region, the feeling conveyed by palpation of the tumor was that of a fibroma, or fibro-lipoma. The walls of the sac were of unusual thickness.

CYST OF THE PANCREAS.

Dr. Garrigues presented this specimen. (See Medical Record, March 18, 1882.)

Dr. Gerster remarked that he saw no reason why the tumor just presented should be regarded as a pancreatic cyst. It was probably an ovarian tumor, and the fact that the growth was found high up in the abdomen, did not militate against such a view. Since the pancreas was found entirely healthy, he could not understand why the tumor was to be regarded as one involving that organ.

Dr. Garrigues replied that he must maintain his opinion in regard to the pancreatic nature of the cyst. The latter had no connection with any other organ. He was not certain that the pancreas was quite healthy, because it had not been removed and was thus not examinable. In the cystic fluid he discovered filiform corpuscles, which he had never before seen elsewhere. And finally he had convinced himself that both uterus and ovaries were in all respects normal.

SIMPLE METHOD FOR THE DETERMINATION OF ATMOSPHERIC OXIDIZERS.

Dr. Caillé alluded to this method, which had been recently proposed by Dr. John Long, of Evanston, Ill., for the local registration of certain atmospheric conditions in all parts of the country. The practical point of hygiene involved in the matter was to be found in the relation which oxidizing agents bore to disease germs. In view of the modern tendency to ascribe pathogenic significance to various products of putrefaction and fermentation, it became important to determine just how they were affected by atmospheric ozone and similar gases, and in what quantities these gases existed. The word ozone, he explained, was here used in a collective sense for various oxidizing agents present in the air.

The presence or absence of these gases might be supposed to exercise an appreciable influence over the origin, spread, and termination of epidemics or endemics of infectious diseases. In regard to the method itself, it consisted merely in suspending strips of paper in the air, saturated with iodide of potassium and starch, guaiac extract, and oxide of thallium. The intensity of discoloration produced, by comparison with a previously prepared scale, would thus directly indicate the point to be ascertained.

INTRACRANIAL SARCOMA.

Dr. Gruening presented a specimen of spindle-celled sarcoma of the cranial cavity, accompanied by the following history: The patient was a young man, aged twenty-seven. He was admitted in June, 1881, to the Mt. Sinai Hospital, complaining of suddenly occurring headache, visual disturbances and vertigo, followed by an impairment of his memory. Optic neuritis was present, as well as partial aphasia, and paralysis of the abducens on the left side. The case progressed to complete blindness; hemiplegia of the left side was developed, and the patient died comatose.

At the autopsy a brain tumor, which had been supposed to exist during life, was found. The cerebral convolutions were much flattened. The dura mater was adherent at the base, and at one point there was erosion of the bone. The neoplasm itself occupied the left side. In its growth and development it had encroached mainly on the middle and lower lobes, the frontal lobes, and the region of the island of Reil. Microscopical analysis showed the growth to be a gliosarcoma.

Papylitis was found in both eyeballs, but the optic nerves were healthy, showing that the disease had not progressed from within. Various explanations had been offered to account for the occurrence of papylitis. Graefe had attributed the phenomenon in question to stasis in the retinal veins, resulting from pressure upon the sinus cavernosus. The transmission of such pressure, he supposed, took place through the superior ophthalmic vein. Dr. Gruening thought that, in view of the anastomosis existing between the latter vessel and the anterior facial vein, Graefe's theory could not be upheld.

According to Schwalbe, stasis occurred as the result of a communication existing between the sub-

arachnoid spaces, and the canal between the sheaths of the optic nerve. But in Gruening's case no fluid was found in this locality. Benedikt finally ascribed the papylitis to intracranial irritation, producing vaso-motor disturbances.

Dr. Rudisch remarked that the sudden occurrence of headache rendered the differential diagnosis between apoplexy and encephalitis, and cerebral tumor, quite difficult. He also laid stress on the power of the brain to acquire tolerance of slowly progressive pressure. In this connection he related a case of tumor of the brain, in which the patient had been able to perform her work a day before her death. Finally he said that disease of the terminal portion of a nerve was by no means rare; as instances of this kind he need only mention trismus, tetanus, and reflex paralysis.

Dr. Gruening replied that these diseases were in no sense analogous to papylitis. The terminal expansion of the optic nerve was the retina, which was found healthy in the case he had described.

SARCOMA OF BRAIN—DEATH FROM APOPLEXY.

Dr. Caillé presented a specimen of brain tumor, removed from the body of a woman aged thirty. The immediate cause of death was cerebral apoplexy. The woman had been ailing about eighteen months with symptoms of constant headache and vertigo, and frequent attacks of nausea. On examination she was found to have strabismus and diminished sensibility on the right side. There were also noticed the following signs: Unsteady gait, defective memory, partial aphasia, and voracious appetite, occasional rise of temperature and attacks of mania. The urine seemed normal. At times she would appear to be well, and cease to complain. Such intervals would last a week or ten days, to be followed by a return of her former troubles. Her death was sudden, almost unexpected. At the autopsy a large sarcoma was found in the left hemisphere. It occupied about the region of the corpus callosum, and extended from the corpus striatum into the inferior cornea. In the centre of this neoplasm a recent hemorrhagic clot about the size of an English walnut was discovered.

Dr. Tausky showed a uterine polypus which he had removed from the cervix, the operation being attended by profuse bleeding. In this connection he questioned the efficacy of the liquor ferri persulphatis as a hæmostatic.

Dr. Mundé said that the application of the iron compound was a safe procedure only when cervical hemorrhage called for interference. He believed it to be dangerous when used within the wound. For the latter purpose a mixture of equal parts of glycerine and liquor ferri seemed preferable.

REMOVAL OF CYST OF THE BROAD LIGAMENT.

Dr. Mundé presented a cyst of the broad ligament which he had removed from a woman twenty-two years of age. The patient had consulted him a short time ago with regard to a tumor in the abdomen. She had been married about a year and a half, and during the past year had noticed an increase in the size of the abdomen on the right side, which at the time he saw her had attained about the size proper to pregnancy at the seventh month. During the last three or four months her health had become impaired; she had grown thinner, and was decidedly anæmic in appearance. On external examination of the abdomen he found a uniformly fluctuating tumor, apparently a monocyst. The sound, passed into the uterus, revealed retroversion. The diagnosis of ovarian cyst was made, probably a monocyst. Aspiration was not resorted to, for the reason that in the only case in which he had made use of it inflammation was excited within the cyst, decomposition of its contents took place, peritonitis developed, and he was compelled to perform ovariotomy under very unfavorable circumstances, the result being death on the sixth day, from septic pyæmia. He had no reason to suppose the present case was one of cyst of the broad ligament, the patient's history, her anæmic condition, and the physical examination pointing to cyst of the ovary. It was true, it had been said that unilocular cysts of the ovary did not attain a size larger than an adult's head, but there were exceptions to this rule. Even had he known beforehand that the case was one of cyst of the parovarium, it was probable he would have operated, for the reason that, although a number were cured by tapping, an equal or larger number refilled, and finally required an operation for their removal.

On opening the abdominal cavity but one adhesion was found to the omentum, which was divided. The cyst was then punctured, and there flowed forth a clear, slightly bluish-colored fluid, which led him immediately to remark that it was, without doubt, a cyst of the broad ligament. After the cyst was emptied of its contents (about five quarts of fluid) the pedicle was sought for. The tumor was found to be firmly attached to the pelvic cavity on the right side, and could not be enucleated from its peritoneal envelope without undue force. It was therefore cut off, and the edges of the stump were united with those of the abdominal wound by silk sutures. A drainage-tube, consisting of the barrel of a hypodermic syringe, to which a piece of rubber tubing was attached, was introduced instead of the regular drainage-tube, which was found to be altogether too long. All antiseptic precautions were taken with the exception of the use of the spray. The patient rallied well; the temperature at no time rose above 101° F., nor the pulse above 96°. The stitches were removed between the tenth and the fourteenth days the patient left her bed on the sixteenth, and the private hospital, to go to her home, on the twenty-third day. Six weeks after the operation she had gained a great deal in weight, and the wound had entirely closed, except a very small opening, into which the smallest-sized drainage-tube was still introduced. The case was interesting principally with regard to the difficulty of diagnosis. Had tapping been resorted to it could not, according to the recent investigations of Dr. Garrigues, have led to a positive diagnosis between cyst of the ovary and of the broad ligament by a microscopical or chemical examination of the contained fluid. The only positive differential means—namely, the presence of the ovary by the side of the tumor—could not be appreciated in this case.

CERVICAL SPONDYLITIS.

Dr. Brandeis related the history of a supposed case of this kind. The patient was a young lady of seventeen, who had been under treatment for chronic otorrhœa. Pain in the throat was also complained of. Examination revealed a small elastic swelling behind the left palato-glossal arch. Peritonsillitis being suspected the swelling was punctured, which gave the patient some relief. Two days later a second puncture was made and a few drops of pus exuded. Pain in the left shoulder then set in, and pressure on the spinous process of the third cervical

vertebra produced very severe distress. The swelling had now attained considerable size, and upon being again punctured a large quantity of pus escaped. Two eminent physicians saw the patient in consultation. One gentleman pronounced the case to be one of spontaneous spondylitis associated with retropharyngeal abscess. The other, however, believed it to be an instance of hypostatic abscess originating in disease of the Eustachian tube.

DR. JACOBI said that an ordinary pharyngitis or tonsillitis might lead to superficial caries of the vertebral body. The prognosis in such cases was good.

DOUBTFUL CASE OF VARIOLOID.

Dr. Jacobi reported a case of this kind, in which he was unable to make a positive diagnosis during the first four days of the disease. A woman, fifty-five years of age, was admitted to Bellevue Hospital suffering from acute nephritis. After recovering from this attack, she was again taken sick with a chill; her body was profusely bathed in sweat and covered with a sudamina-like eruption, the face being free. Her temperature ranged from 101° to 105° F.; the urine contained albumen and renal elements. On the fourth day her face became covered with numerous pustules, not entirely characteristic in appearance, but sufficiently so to establish the diagnosis. Dr. Janeway had stated that similarly doubtful cases were not rare.

INTESTINAL OBSTRUCTION FROM FECAL IMPACTION.

DR. SCHWEDLER related the history of a man, aged sixty-three, whose death was due to intestinal obstruction. The patient was anæmic, and a sufferer from chronic constipation. It was his custom to take a saline aperient once a week. On February 6th he complained of pain in the abdomen. Absolute rest, and the administration of ice and morphine, gave him relief. Two days later he vomited several times, and developed collapse. He rallied again under appropriate treatment. An obstruction in the superior part of the small intestine was suspected, although nothing definite was detected on a careful examination. On February 11th he vomited fecal matter, and soon died. At the autopsy, the ileo-cæcal valve was found completely clogged up by numerous small lumps of hard fecal matter. The small intestine had a bluish-red color, the parietal peritoneum was of normal appearance, and the visceral peritoneum was found in a state of acute hyperæmia.

CHEAP BRANDY AND ABSINTHE are the cause of a large proportion of cases of insanity in parts of France. The United States Consul at La Rochelle, in his report on French brandies, points out the fact that no pure brandy is now made in Cognac and the district adjacent. He says that German alcohol distilled from potatoes is imported, doctored, and sold for brandy, and that the French artisans and peasants, who formerly used light wines, have of late years used much of this so-called brandy. He says: "Its characteristic effect is to produce an intoxication in which the patient is especially inclined to rage and physical violence, while hopeless insanity is the inevitable consequence of persisting in its use, even for a relatively short period of time." It is at least worth the physician's while to know that there is no such thing as pure cognac now.

FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Eleventh Annual Session, held at La Rochelle, August 24, 25, 26, 1882.

M. AZAM, OF BORDEAUX, PRESIDENT, IN THE CHAIR.

(Continued from page 417).

SECTION IN MEDICINE.

M. CARRET read a paper on the

ETIOLOGY OF GOITRE.

His view was that goitre only manifests itself along an isothermal line of a certain altitude. The primary cause he believed to be a *bacillus* living in the soil. This organism he had not yet discovered, however.

In the discussion, M. BOULOAK-BACHI cited some interesting facts, to show that drinking-water played a prominent part in the etiology of the disease in question. At Rheims the inhabitants used to get their drinking-water from wells; goitre was then frequent. Since aqueduct water had been introduced it had entirely disappeared.

M. DAGRÈVE described a peculiar tumor of the neck, frequent in singers, resembling goitre, but due to anæmia, and yielding readily to iron.

M. EDWARD LANDOWSKI read a paper on the

PROPHYLAXIS OF PHTHISIS,

in which he took the ground that that disease is contagious. He insisted upon the importance of early diagnosis and of isolation.

M. DE MUSGRAVE-CLAY also thought that phthisis should be regarded as contagious, and isolation attempted.

M. HENRI HENROT read a paper of much scientific importance upon

A CASE OF MYXŒDEMA.

A patient suffering from this disease died at the hospital in Rheims. Post-mortem examination showed profound and extensive lesions of the vegetative nervous system, hypertrophy of the pituitary body, of the renal gland, and of the sympathetic, both ganglia and their branches being greatly enlarged. There were bony scales upon the pia mater over the medulla. In other organs there were found many exostoses on the bones, hypertrophy of the liver and kidneys, and also of the submucous and subepithelial connective-tissue. On the other hand, there was atrophy of the heart and of the whole muscular system, and diminution in size, by almost one-half, of the blood-vessels. The autopsy, apparently, throws much light upon the nature of this curious disease. During life there were no visceral troubles, but a paresis of sensibility, general and special. The hypertrophies were due to an infiltration of cells in the interstices between the proper cells of the tissue. The atrophy was due to compression by growth of the connective-tissue. The inference from this case is that myxœdema is due to a disease of the sympathetic nervous system; also, that the renal gland and pituitary body are parts or appendices to this system. The fact that in fishes, which have much mucoid tissue, the pituitary body is quite large was introduced in further support of this view.

M. L. H. PETIT read a paper in which he tried to show that

HEMORRHAGIC SMALL-POX

was due generally to the fact that the patient, when attacked, already had some disease or degenerated tissue.

M. Nepveu defended the view that

RESECTIONS OF THE JOINTS FOR DISEASE

are generally useless, or worse; that though death may not result the cure is very imperfect. He instanced 60 cases of resection of the wrist, in which there were 3 deaths, while in 6 cases amputation was necessary; in 8 the functional result was bad, in 13 medium, and in 15 good. Among 6 cases of resection by Billroth, 5 died, phthisis supervening afterward. An exactly similar experience is related by Verneuil, who is now strongly opposed to resection.

M. Ollier, of Lyons, said that for five years he had held the same views as those of Nepveu. Since the introduction of antisepsis, however, he thought that the indications for resection for traumatism had diminished, while those for disease had increased. Resections should not be done, however, before the twelfth year, nor after the fortieth. The only point at issue practically, therefore, was whether resection should be performed in the scrofulous between the ages of twelve and forty years.

M. Lecler, of Romtlac, and M. Henrot, reported cases of spontaneous gangrene of the foot, cured by the thermo-cautery and antiseptic dressings.

M. Vovard, of Bordeaux, reported an almost uniform success in the treatment of

MENINGITIS IN CHILDREN,

by using iodide of potassium internally, and the application to the scalp of croton oil, mixed with a blistering cerate. M. Vovard did not clearly show that his cases were always meningitis, certainly not of a tuberculous nature.

M. Rigabert reported two cases of "Generalized Vaccine Eruption," and M. Monod described his "Treatment of Recto-vulvar and Recto-vaginal Fistulæ." This consisted essentially in first cutting entirely through the whole recto-vaginal partition; then performing perineorrhaphy.

M. Duplony reported his experience with the "Injection of Acetic Acid in Epitheliomata." He made his injections into the substance of the tumors and the surrounding zone.

M. H. Bernheim, Professor of Clinical Medicine at Nancy, described

A NEW FORM OF TYPHOID FEVER,

which he called the "cardiac form." It embraced that class of cases in which without appreciable cause there comes on a paralytic accession of the heart's rapidity ending in death. It may exist at the beginning of the disease, or may come on later, and may or may not be accompanied with other adynamic symptoms. Professor Bernheim thinks that this peculiar form of the fever is due to the direct action of the specific poison upon the cardiac centre. It acts like digitaline in toxic doses. This similarity explained why digitalis was not only useless, but even dangerous in typhoid fever.

M. Aubert, by tests with pilocarpin ointments, found that needle pricks through the skin remain open sufficiently to absorb pilocarpin for two or three days. His inference was that surgeons who had slight abrasions or pricks on their hands should bear in mind that substances can be absorbed through them for the time specified.

Buchanan, of bogus diploma memory, has finished his term of imprisonment and is abroad again.

Correspondence.

BRONCHITIS AND INTERPLEURAL PLASTIC EXUDATION.

To the Editor of The Medical Record.

Sir: Permit me to reply briefly to Dr. Robinson's letter in the last Record. Should we be checked in seeking after truth because Laennec gave the weight of a great name to certain views of the origin of râles, and teachers of physical diagnosis have adopted these views year after year?

Accurate as Laennec was as an interpreter of facts, he was still more accurate as a recorder, and his "talent and discrimination" in reporting cases "appear equally conspicuous." Now in all the cases except two reported in his works on the chest,[1] in which fine râles were heard ante-mortem, pleuritic adhesions were found post-mortem. These two exceptions are the following: At the lower part of the right lung behind, "there was a slight crepitous rattle," and on post-mortem examination "the lower lobe was indurated and posteriorly it was as hard as liver." (Case VII.) Therefore no air could enter the lung when the crepitous rattle was heard. The condition of the pleura is not mentioned, nor is it in most of his other cases, except where adhesions are recorded. In the second case, the day before death there was "crepitous rattle, barely perceptible at the inner edge of the scapula." On post-mortem examination "the indurated lobules formed slight prominences on the surface of the lungs." (Case IV.) No other mention is made of the condition of the pleura, but it is easy to conceive that a pleura studded with prominences could not be in a normal condition. The amount of plastic matter necessary to produce a "barely perceptible crepitous rattle" might easily, too, have been absorbed between the examination and death which occurred on the following day.

In every case recorded by Lorris in his work on phthisis,[2] in which fine râles were heard, pleuritic adhesions were found post-mortem.

Some experimenters have shown that by "injecting into the bronchia liquids of different density, râles are produced;" but others have shown that by throwing salt into the fire, or rolling a lock of hair between the fingers, crepitation is produced. Now facts such as these only prove that certain sounds are produced under certain conditions, and not that they are not produced under other conditions. Such evidence is only presumptive, but the following is, I think, conclusive:

In 1879 a commission was appointed by the United States Government, having for its object the "stamping out of contagious pleuro-pneumonia among cattle." In August of that year Dr. Leaming was invited to make examinations of some of these cattle, and his diagnoses were to be tested by post-mortem examinations performed immediately.[3] In every case where râles had been heard pleuritic exudation was found, and where pleuritic exudation was found there had been râles. In six of these cases one lung was completely consolidated, therefore no air could enter and no râles be pro-

[1] Translation of Laennec on the Chest by Dr. Forbes, 1850.
[2] Lorris on Phthisis, translated by C. Cowan, M.D., 1836.
[3] J. R. Leaming, M.D.: Art., Endemic Pleuro-pneumonia, Medical Gazette, February 7, 1880.

duced in them. In none of these cases was there "splenization" or "softening."[1]

I have not been able to find any carefully recorded cases of œdema of the lungs, in which an examination made a short time before death revealed crepitant and subcrepitant râles, which did not also show pleuritic adhesions post-mortem.

As to the differential signs of pleuritic and pulmonary râles having been given by most classical authors, I leave to others more learned than I am to decide. I have been led to believe that, until within a few years, all râles were supposed to be of interpulmonary origin, and such being the case, if most classical authors have given the differential signs of interpleuritic and interpulmonary râles, they have performed a remarkable feat.

Respectfully yours,

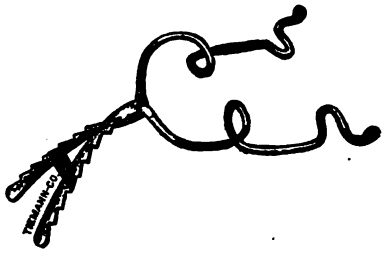
D. M. Cammann, B.A., M.D.

New York, October 9, 1882.

New Instruments.

THE SCHWATKA VARIABLE-TENSION EYE SPECULUM.

This speculum, the invention of Lieut. Schwatka, of the United States Army, and manufactured by Tiemann & Co., is well explained by the accompanying illustration.



The branches that pass under and clasp the eyelids can be of any of the various forms that may suit the ideas of different operators. It is in the lever branches that open and close the former that the essential novelty of the instrument is found. These levers are reflected back on to the same side as the branches they respectively operate, so that their closure opens the branches, and *vice versa*. They are serrated on their outer edges, which indentations are made to firmly receive a rubber band that is the power in opening the speculum, and which power may be made variable by simply slipping the band along the serrations according to the well-known principles of the lever. It is evident that more than one band can be used and increased power be obtained, but as now made, the single band at the end of the levers is sufficient to almost break the finest-made instruments when attempting to close the branches, and is therefore sufficient. The crowns of the teeth are somewhat rounded, making it easy to slip the round rubber band along them to any point, and even during an operation. That fineness of touch so common among oculists, acquired by the manipulation of such delicate instruments as are necessary in their profession, will here materially assist them in properly adjusting this instrument for any operation.

[1] Oral communication of Dr. Leaming.

The advantages claimed for this instrument are its simplicity, which is evident on a glance at the illustration, there being nothing of the instrument whatever in the way of the operator, since the levers are placed directly against the skin. The power is elastic, and as a consequence, the patient seldom complains of pain, as in the case of the positive motion speculums, especially at the inner canthus of the eye. It is more like that of a muscle overcoming another, and in minor operations, where the pain of the operation does not overcome that of the ordinary speculums, its benefits are marked. It might be well to add that this instrument has been placed in the hands of specialists and pronounced successful.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 30, 1882, *to October* 7, 1882.

Williams, John W., Major and Surgeon, now on leave of absence, to proceed to San Francisco, Cal., and report in person to the Commanding General, Military Division of the Pacific, for duty in Department of the Columbia. S. O. 228, A. G. O., September 30, 1882.

Waters, Wm. E., Major and Surgeon. To report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

Irwin, B. J. D., Major and Surgeon. On being relieved as Attending Surgeon, Headquarters Military Division of the Missouri, to proceed to Whipple Barracks, Arizona, and report in person for duty as Medical Director, Headquarters Department of Arizona. S. O. 228, A. G. O., September 30, 1882.

Forwood, Wm. H., Major and Surgeon. Relieved from duty in Department of the Platte, and to report in person to the Commanding General, Military Division of the Missouri, for duty as Attending Surgeon at those headquarters. S. O. 228, A. G. O., September 30, 1882.

Smith, Andrew K., Major and Surgeon. Relieved from duty in Department of Arizona, and on expiration of present sick leave to report by letter to the Surgeon-General. S. O. 228, A. G. O., September 30, 1882.

Burton, H. G., Captain and Assistant Surgeon. Granted leave of absence for four months. S. O. 229, A. G. O., October 2, 1882.

Loving, Leonard Y., Captain and Assistant Surgeon. To be relieved from duty in the Department of the Missouri, to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

Turrill, Henry S., Captain and Assistant Surgeon. To be relieved from duty in Department of the East, and to report in person to the Commanding General, Department of the Platte, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

Moseley, E. B., Captain and Assistant Surgeon. To report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

Skinner, John D., Captain and Assistant Surgeon. To be relieved from duty in Department of Arizona, and to report in person to the Surgeon-General. S. O. 228, A. G. O., September 30, 1882.

POWELL, J. L., Assistant Surgeon. Relieved from duty at Fort Stockton, Tex., and to report at Headquarters Department of Texas, for temporary duty as Post Surgeon, San Antonio, Tex., and Attending Surgeon at Department Headquarters. S. O. 103, Department of Texas, September 30, 1882.

SHUFELDT, R. W., Captain and Assistant Surgeon. To proceed to Jackson Barracks, New Orleans, La., and report to the Commanding Officer thereat for duty. S. O. 93, Department of the South, September 26, 1882.

CARTER, W. F., Assistant Surgeon. Relieved from duty at Fort Concho, Texas, and to report to the Commanding Officer, Fort Stockton, Tex., for temporary duty as Post Surgeon. S. O. 103, Department of Texas, September 29, 1882.

OWEN, WM. O., JR., First Lieutenant and Assistant Surgeon. To proceed to Fort Townsend, W. T., and report to the Commanding Officer for temporary duty at that post. S. O. 138, Department of Columbia, September 22, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 7, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Sept. 30, 1882.	0	25	7	7	2	24	1	0
Oct. 7, 1882.	0	27	30	1	12	31	1	0

DR. GEORGE M. STERNBERG, U. S. A., asks us to publish the following important corrections: Page 316, first column, forty-fifth line from top, for *less* read *more*. Same page, second column, third line from bottom, for 0.5 *per cent.* read 0.05 *per cent.* The same correction must be made in lines ten and nineteen from bottom, same page and column.

DR. MORELL MACKENZIE, the distinguished laryngologist, of London, has been visiting New York during the past week, and has been the recipient of many hospitalities from the leading men in the profession here. He also received similar attention in Philadelphia. At the latter place, Dr. J. Solis Cohen tendered him a brilliant reception on Tuesday evening, and in this city, on Thursday evening, a dinner was given in his honor at Delmonico's, by Professor George M. Lefferts, at which a large number of representative men were present. On Friday evening Dr. R. P. Lincoln tendered him a reception, and Professor Louis Elsberg, also of this city, gives a dinner to him this, Saturday, evening.

MR. HENRY C. BURDETT, of London, the author of "Cottage Hospitals" and other well-known works, sailed for his home on Saturday last.

RUPTURE OF THE STOMACH CAUSED BY LOBELIA.—A man of intemperate habits in England took a powder containing lobelia, capsicum, etc., by advice of an irregular practitioner. The patient died without vomiting. At the autopsy there was found a rent in the stomach, through which the contents had escaped into the peritoneal cavity. In a stomach weakened by disease, an emetic like lobelia may, therefore, produce a fatal rupture.

THE UNIVERSITY OF PRAGUE is no longer to be a German University. By Government vote the lectures will be delivered hereafter in the Czechic tongue. So says report. It is somewhat strange, however, if affairs are so bad, that a man like Gussembauer refuses to leave for a good position in Wurzberg. The lectures have, heretofore, been given in German and Czechic.

THE STATE OF MAINE affects medical Governors. It recently elected Dr. Frederick Robie to the gubernatorial chair. This gentleman has not, we understand, been engaged in practice of late years.

PROFESSOR DU BOIS REYMOND has been made Rector of the Friedrich-Wilhelms University, Berlin.

A WORD TO A YOUNG CONTEMPORARY.—Our esteemed and juvenile contemporary, the *Medical News*, of London, persists in copying from our item column without acknowledgment. We beg to say that this may be the English way, but it is not thought well of here.

A NEW MEDICAL WORK.—The Inner Life of Abram Lincoln. N. Y., 1883, etc.

SHOULD BABIES' MILK BE BOILED, asks the *College and Clinical Record*. Now this shows how much the subject of infant dietetics is being overstudied. We cling to the old-fashioned view, that babies should not be milked any way, much less have their milk boiled.

ASTRONOMICAL PATHOLOGY.—We would inform our correspondent, Dr. S——, regarding the new comet, now only fifteen million miles away, that the coma which affects it is not due to Bright's disease, nor has the New York Pathological Society arranged for the specimen.

TESTING THE ABSORBABILITY OF THE STOMACH.—Drs. F. Penzoldt and A. Faber, of Erlangen, have devised an ingenious way of testing the absorbability of the stomach. About three hours after a meal the patient is given gr. ijss. of potassium iodide in a thin gelatine capsule. This is swallowed with a certain definite amount of water. The gelatine capsule must be such as will dissolve in one to two minutes. The patient then, from minute to minute, spits upon a piece of paper, and a drop of fuming nitric acid is added. In the normal absorbability of the stomach a red coloring appears in from six and a half to eleven minutes, and a blue coloring in seven and a half to fifteen minutes. If the stomach does not absorb well, as in dilatation, the reaction is delayed sometimes from one-half to three-quarters of an hour.

THE TEMPERATURE OF THE STOMACH has been measured by Dr. Rodsajewsky in a case of artificial gastric fistula. It varies with the general body temperature, and with that of the ingested food. When digestion is going on the stomach temperature is lower than that of the rectum, and higher than that of the axilla. Hot food raises the stomach temperature, and also the general body temperature.

LUNACY IN ENGLAND.—The thirty-sixth report of the Commissioners in Lunacy states that the total number of lunatics, idiots, and persons of unsound mind in England and Wales, who were registered on

the 1st of January last, was 74,842, an increase upon the number recorded in the previous year of 1,729. These figures, as usual, do not include the lunatics (230 in number) residing in private houses under the personal supervision of their committees. The increase was almost entirely (1,717) among the pauper insane.

A Hint for the Treatment of Phthisis.—Mr. H. Osborn Bayfield suggests (*British Medical Journal*) that the use of inhalations of volatilized palm oil may be useful in the treatment of phthisis. He bases his opinion upon the fact that workmen engaged in tinning where palm oil is used as a flux inhale the volatilized oil and get fat. Those previously emaciated or weak rapidly improve. The idea is worth a trial.

Massage is very useful in joint diseases. That it has a notable mechanical effect here is shown by an experiment of Mosengeil's. He took rabbits and injected India ink into various joints. Some of the joints he massaged, others not. He then opened the injected joints. Those that had been rubbed were almost free from ink, which could be seen coloring the outgoing lymphatics for some distance. In the other joints the ink was found in abundance. Pure glycerine is recommended as an agent to be used in massage, rather than sweet oil, which soon gets rancid. As a rule, massage should be done twice daily for from five to twenty, or in chronic troubles, thirty minutes each time. After the rubbing it is sometimes well to lead the animal about quietly for five or ten minutes, then cover the parts with warm and moist applications.

Massage is one of those forms of treatment which will give good or no results, according as it is carefully and conscientiously used.—*Journal of Comparative Medicine.*

Notes in Comparative Pathology.—Some curious and interesting cases of diseases in various lower animals are reported in the *Journal of Comparative Medicine.* A Spitz bitch is described as suffering from an obstructed cervix uteri, with resulting hæmato-pyo-metra. Over twelve ounces of fluid were taken from the distended womb.

A llama at the Central Park Menagerie died from what might be termed galloping consumption. The superior (or anterior) lobes, as in man, were most affected. There was a fibrous tumor with a calcareous shell attached to the perineal muscles.

The eagles at the same institution are said to suffer from cystic tumors developing in the eyelids.

An iguana which kept company with a python was embraced with such excessive tenderness as to produce a bloody tumor in its left flank. The animal died from its effects.

The Cook County Hospital, at Chicago, Ill., has undergone a change of administration. At a meeting of the Board on September 3d, the whole medical and surgical staff was declared vacant and a new staff appointed, without reference to the wants of the medical colleges. It is expected that a chief medical officer with a salary will be put in charge. All this is said to be the result of politics. Between politics and homœopathy our Chicago brethren seem to have a hard time.

Trouble in the Medical College of Virginia.—Gov. Cameron a few days ago appointed a new Board of Visitors for the Medical College of Virginia, in Richmond, thereby summarily displacing the old board. This action created much excitement in medical circles, and was much criticised by the press and public. The old board, acting under legal advice, determined to hold on, claiming that the Governor, under the law, had no right to remove them; that he could only fill vacancies, and that no vacancies existed. The new board were refused admission to the Medical College by the old Faculty, which had taken possession.

An Insane Asylum Abolished.—The New Orleans City Insane Asylum has been abolished, and one hundred and thirty-five of its inmates, in charge of a large number of attendants, have been taken to the insane asylum at Jackson, La. This action is due largely, it is said, to the exposures of the ill-conduct of the institution, made by the novelist, Mr. George W. Cable, who has been a sort of American Charles Reade in the matter.

A Remedy for Corns.—Dr. Traill Green, in the Philadelphia *Reporter*, commends, from his experience, Mr. Gezou's remedy for corns. The formula is as follows: ℞. Salicylic acid, 30 parts; ext. cannabis indicæ, 5 parts; collodion, 240 parts. The remedy is applied with a camel's-hair brush. In four or five days the corn comes off, and the patient should then take a warm foot-bath. A second application may be needed.

A Conscientious Doctor.—The St. Louis *Courier of Medicine* publishes and the *Detroit Lancet* quotes the following anecdote of the late Dr. Geo. B. Winston, of St. Louis. We commend it as an illustration of the fact that there still exists a genuine nobility and heroism among medical men, though it is much the fashion just now to pooh-pooh those who hold such a view: "A friend once remarked to him, 'Doctor, what necessity is there for this ceaseless labor and study at your time of life?' With a look of astonishment, never to be forgotten, he replied: 'My dear sir, I am under bonds to do it. When I offered my professional services to this community, there was an implied covenant on my part that, so far as God gave me strength and ability, I would use them for gathering up and digesting all that has been said or written in regard to the diseases to which human flesh is heir, and if I should lose a patient because of my ignorance of the latest and best experience of others in the treatment of a given case, a just God would hold me responsible for the loss, through inexcusable ignorance, of a precious human life, and punish me accordingly; and whenever I get my consent to be content with present professional attainments and trust my own personal experience for success, I will withdraw from practice and step from under a weight of honorable obligations which, with my best endeavors to meet them honestly and conscientiously, still sometimes is almost heavier than I can bear.'"

The Last Thing in Incubation.—M. Tarnier, says *The Lancet*, the surgeon of the Maternity Hospital in Paris, struck by the great mortality among infants prematurely born and those which are very sickly after birth, has conceived the ingenious idea of constructing a box which is almost exactly similar to the incubators used for poultry. This box is divided into two compartments—the lower one being used as a reservoir for hot water, while the infant is placed in the upper one, which is well stuffed at the sides and fitted with a sliding glass cover. The temperature is maintained at 86 degrees Fahrenheit, and M. Tarnier has found that by keeping infants in the incubator for a period varying from

two days to six weeks their vitality is enormously improved. He has made experiments upon five six-months children, six seven-months, and thirteen eight-months children, and he has only lost two of them, whereas, according to his statement, three-fourths of them would have died but for this adventitious aid to vitality.

THE LATE DR. JAMES B. REYNOLDS.—*Whereas*, the Medical Board of the Nursery and Child's Hospital receive with deep sorrow the announcement of the death of Dr. James B. Reynolds, who for the past sixteen years has been a member of the attending staff of this institution, contributing so much to its welfare and success;

Resolved, That we, his former associates, desire to record our admiration for his manly qualities, and our warm appreciation of his faithful service and superior counsel so generously bestowed upon this and similar institutions. We would express our high regard for his learning and distinguished skill as a physician, and for his honorable and attractive personal characteristics.

Resolved, That we deeply deplore the loss to the community and to the profession of which he was an honored member; that we shall ever cherish the memory of our associate as an example of professional rectitude and private virtue worthy of imitation; and that we tender to his bereaved family our warmest sympathy in their great loss.

Resolved, That a copy of these resolutions be communicated to the family, and that they be published in the medical journals of this city.

J. J. HULL,
E. L. PARTRIDGE, } *Committee.*

COST OF BRITISH ARMY AND NAVY MEDICAL DEPARTMENT.—The salaries of the Directors-General of the British Army and Navy Medical Departments are put down at £1,500 and £1,300 per annum respectively. A Deputy Inspector-General in the Navy receives £720. The cost of naval medical establishments at home and abroad amounts to £63,445. The expense of carrying out the Contagious Diseases Act is £14,800 per annum, whereas in the army it is only £6,360.

LOCOMOTOR ATAXIA WITH WELL-MARKED TENDON-REFLEX.—Dr. James Leslie, of Hamilton, Canada, sends us an account of a case of locomotor ataxia in a shoemaker, aged forty-five years. The symptoms of inco-ordination without loss of muscular power were well marked. There were no lightning-like pains, however, and the tendon-reflex at the knee was very distinct. The patient had not had syphilis. He received the most benefit from daily forcible flexion of the thighs upon the abdomen.

A NIGHT MEDICAL SERVICE will be established in Brooklyn next January. A service has been established in Washington, D. C. In this city the night medical service has an average of one or two calls every night.

THE GARFIELD MEMORIAL HOSPITAL BOARD has received a deed of the valuable real estate of the National Soldiers' and Sailors' Orphans' Home. The Board will at once sell the land and purchase a site in the city for the proposed hospital.

SURGICAL OUTFITS FOR RAILWAYS.—The Pennsylvania Railroad Company has purchased two thousand tin boxes containing a few simple surgical materials likely to be used in case of accident. The boxes are kept on the locomotives. Each one contains 1 rubber compress, 1 package of absorbent cotton, 6 rolls of bandages, 1 pyramid of pins. This outfit must always be kept up, and when anything is needed requisition should be made at once.

With the box are the following simple directions: When an arm or leg is crushed, causing hemorrhage, pass compress around limb immediately below the injured part. In case of rupture, if a vein, tying it lightly until arrival of surgeon. The rupture of an artery can be distinguished by the color of the blood, which is red, and spurts out, while a vein has black blood and flows continuously. For wounds on the head or face apply absorbent cotton, and bind with a bandage. The company deserves great credit for the humanity and forethought shown in the adoption of this scheme.

THE SMALL-POX is making great ravages at Cape Town. There have been 2,000 cases thus far, mostly natives, of which 600 proved fatal. The disease has reached the military. Cape Town has been declared infected, and all vessels sailing thence for other ports in the colony will be quarantined. The greatest excitement prevails in the diamond fields.

DR. J. W. HOLLAND, who has for eighteen months edited with much ability and success the *Louisville Medical News*, has resigned. The *News* will now be conducted under the editorial care of Drs. L. P. Yandell and L. S. McMurtry.

THE YELLOW FEVER EPIDEMIC.—The yellow fever has almost disappeared from Brownsville, Texas, only 12 cases and 2 deaths being reported in the week ending October 7th. This makes a total of 1,912 cases and 109 deaths. The disease is now limited to a few mild cases inside Chi Arroyo cordon, but is reported to continue with great severity in the Mexican towns and ranches bordering on the Rio Grande. The infected districts are prevented from spreading the disease into Texas by a cordon of guards extending from Brownsville to Laredo.

Official reports by mail from Pensacola, Fla., have been received to include the 4th of October, 1882, as follows:

Date.	*Cases.*	*Deaths.*	*Date.*	*Cases.*	*Deaths.*
September 30	44	3	October 3	55	5
October 1	45	4	October 4	55	5
October 2	45	5			
Total				244	22
Previously reported				725	76
Total during epidemic				969	98

Later reports show that the fever continues without abatement. On October 9th, the forty-first day of the scourge, there were 48 new cases and 5 deaths, making a total of 1,300 cases and 112 deaths.

SEX AND RACE.—In most European nations the proportion of male births to female is as 105 to 100. Among the Jews, however, the proportion rises to 110 or 120 to 100. This is thought to be due to the fact that marriage is earlier among the Jews.

THIRTY-FIVE YOUNG DOCTORS have recently arrived in this city from Russia.

THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY will hold a special session on October 17th at Indianapolis, Ind.

FIRST RESECTION OF THE STOMACH IN AMERICA.—Dr. F. W. Koehler, of Louisville, performed resection of the stomach for cancer, September 2, 1882. We will give particulars in our next issue.

Original Lectures.

ON DIPHTHERIA AND PARALYSIS OF THE VOCAL CORDS.

By MORELL MACKENZIE, M.D.,
LONDON, ENGLAND.

I. DIPHTHERIA.[1]

Professor Bosworth introduced Dr. Mackenzie, who spoke as follows:

Gentlemen—When I found that Professor Bosworth had been kind enough to put my name down for a lecture, I hesitated about accepting the great honor he proposed to confer upon me, and for two reasons—first, I myself object to all lectures, with but few exceptions; and, second, on account of the subject which he had chosen for me.

For myself, and perhaps many of you think the same, I believe the days of lectures have gone by. Lectures were all very well in the middle ages, before works were written, or at least scattered very widely, and I still think they are well enough for clinical purposes, and also in cases where you have some instrument to describe, or some mode of investigation to exhibit, such as is seen in experimental physiology; but I believe students will learn much more from the studying of books than from listening to lectures.

I also hesitated on account of the subject which had been selected for me. It was not of my own choosing, and, as some of my friends present well know, it is impossible to do justice to it in the course of the comparatively few minutes which we can now occupy. However, without consuming your time with excuses, I will make a running commentary on the disease to be considered.

In the first place, I shall not trouble you with historical details to show that the disease existed in the earliest time. It will interest you, perhaps, to remark that the first accurate description of it was written by an American, Dr. Samuel Bard, of this city. Previously to that time, diphtheria had been described in a somewhat casual manner. As you may know, an accurate description of croup, which, after all, is a form of diphtheria, was written by Dr. Home and several English writers, but all these writers only took a local view of the disease; they did not understand the various intricacies of the complete disease. It was Dr. Samuel Bard who first pointed out that the epidemics of the middle ages and the disease described in Scotland as croup, and afterward described in Boston, were simply varieties of one disease known now as diphtheria.

Nor will I endeavor to give you a minute definition of the disease. I once tried to define it, and published my definition, and I thought it was a very good one until the reviewers said that it was not a definition at all, but merely a description, and since that I have not attempted to define it. It is sometimes considered to be an inflammatory disease of the mucous membrane of the throat, and there is a certain amount of inflammation produced by a definite cause; it generally occurs epidemically, sometimes endemically, and the great peculiarity of it is that there is a false membrane formed in the throat, and that false membrane is adherent. These are the general characteristics of the disease. Now we have to consider what is the specific nature of the disease. Here we meet with difficulties. Is it the result of certain germs, or is it not? One of the best writers on this subject, Professor Jacobi, who is with us to-day, does not, I think, believe in the germ theory. At least that was his opinion two years ago; but we change our views so often in these days that I should like to be informed if I am incorrect on this point. Many of you are well aware that certain minute bodies, generally round, and microscopic in size, are found in the false membrane of diphtheria. I myself was rather guarded in my book in giving my opinion upon this part of the subject. I did not like to express myself positively. I ventured, however, to say that if germs will not cause the disease, at any rate they have much to do with it, and if not actually the origin of the disease they carry it. That is my opinion still. I do not consider the question yet settled whether or not bacteria are the specific cause of the disease. Some interesting experiments have been performed by Professor Wood, of Philadelphia, the most important and conclusive, as it seems to me, ever performed in connection with diphtheria, and he has shown that bacteria are exceedingly abundant, increase in proportion with the violence of the disease, and are found in the blood in all cases of malignant diphtheria. By a series of most interesting experiments he demonstrated that these germs actually attack the white blood-corpuscles, and the disease seems to produce its main effect upon the constitution by this process of killing the blood at its very origin.

Well, gentlemen, my opinion is that these bacteria are most important, and Dr. Wood also has shown that they are present in every case of severe inflammation of the throat even, that is not diphtheritic in character. An important feature of his experiments was that bacteria abounded in proportion to the severity of the disease. He also showed that while fresh mucous membrane was capable of producing the disease by contiguity, when the action of the bacteria was destroyed—the bacteria were dried, so that they no longer had any activity—diphtheria no longer could be produced by infection or contagion. This is a very important point, but it does not settle the question completely, for the drying of the membrane may have destroyed some other element which produces the disease.

So we are in the position we were four years ago, and as Professor Jacobi has very properly said, the question is still *sub judice*. But I must say that it is of great importance to thoroughly determine, as far as possible, the truthfulness of this question, because, if germs have nothing to do with it, I should consider that the disease is less infectious than it is really.

Of course this question brings up the question of the identity of croup and diphtheria. Is croup a separate disease from diphtheria? That is an important point. I hold that the two diseases are quite identical. The chief reason why there is so great confusion concerning these two diseases is because the word croup has been applied in a vague way to different conditions. You all know that there are three kinds of croup: (1) diphtheritic croup; (2) catarrhal croup; and (3) nervous croup. I think that a term which can be applied so loosely is a rather unsatisfactory one to be used in medicine. I consider true croup, that is, the disease in which there is false membrane in the larynx, as really diphtheria. Then we have catarrhal croup, which is a slight inflammation of the lining membrane of the larynx. Besides, we have in young children a

[1] Delivered at the Bellevue Hospital Medical College, New York.

peculiar spasmodic affection which produces a peculiar crowing noise, technically called laryngismus stridulus, and is called nervous croup. All this has made great confusion, and I recommend to you to give up the word croup entirely. The term is used so vaguely that it only confuses. I believe, after all, that it is a mere theoretical distinction. We do not treat a disease according to its name; we study the symptoms and character of the attack, judge of the patient's whole appearance, and see whether he is vigorous or feeble, and then treat him accordingly, and not according to whether a disease is known by this term or that. It has always seemed to me that this discussion of the identity or non-identity of croup and diphtheria is very much like the discussion which once occurred as to how many angels could sit upon the point of a needle. The most violent controversy took place upon that question, and it was about as important as the question of the identity of croup and diphtheria.

We will now pass on to what is more important, and that is the

PROGNOSIS.

I leave out of our consideration the symptoms and the pathology, for either one of these is too extended to be considered at this time. These parts of the subject have been treated in detail in the text-books. As I wish to make the few remarks I offer as practical as possible, I will at once proceed to speak of prognosis, and one thing I wish to urge upon you is not to be guided by statistics. The fact is, according to the present system of getting evidence upon this point, we are not able to determine accurately what the rate of mortality is. We can only determine the actual number of fatal cases, and we do not know the number of slight cases. I have known of some of my friends saying that they had treated two hundred cases of diphtheria without a single death, but I have always thought that many of them could not have been cases of true diphtheria. Diphtheria is such a fatal disease that when a thick false membrane is deposited in the lower part of the pharynx, still more in the larynx, you must consider your patient as being in the greatest possible danger. It is one of the most fatal diseases you will have to deal with when you are asked to treat a case in which the false membrane is thickly deposited in the throat, and especially if it has extended into the larynx. Your prognosis, therefore, should be very guarded.

As a rule, the temperature is not very much raised in ordinary cases of diphtheria, not so much so as in some milder diseases, perhaps in a simple tonsillitis it may be higher, but in severe cases the temperature is often excessive, and this will point to an unfavorable prognosis. Or if in the beginning there is high temperature with great depression and disposition to vomit, you may give a very unfavorable prognosis. I think these conditions have not been sufficiently dwelt upon, and therefore I wish especially to impress them upon your minds at this time.

DIPHTHERIA A LOCAL DISEASE.

I think that, at the beginning, diphtheria is a local disease. This view was ably put forward by my friend Dr. Elsberg more than ten years ago. He showed in an article published in the *Medical Gazette*, that although the disease apparently was constitutional from the first, it was in almost all cases primarily local. That is the view I believe in. I believe that the effect of the poison may sometimes be so great that the disease appears to be constitutional from the commencement. I believe that such cases are analogous to those of scarlet fever or small-pox, where the patient is struck down at the very moment of the invasion of the disease. The poison must enter through some part of the system, and I believe that it is local at the beginning. These points bear upon prognosis, and are of great importance. From prognosis we will now pass to

TREATMENT.

Here, again, remedies of the most varied character possible have been recommended. I recollect reading a paper written by a French physician, in which he said he bled every patient, and that he had treated fifty or sixty, and every one recovered. All I can say is that if we should treat diphtheria in London in this way, I think we would almost be prosecuted. It is exceedingly bad treatment. It only shows that it is possible to make a bad diagnosis, or else it is possible for some people to stand depletion in a most extraordinary manner.

The first great point in the treatment of this disease is to attend to constitutional measures and then to local treatment. The constitutional treatment is of no less importance than the local. It is necessary to support the patient from the beginning, and stimulants are of the utmost importance. Do not wait until the patient becomes depressed, but give stimulants from the very commencement. This is an exception to all diseases, and you must begin with stimulants at the commencement, and give them in the more solid form, such as brandy diluted with water, or port wine; such as furnish nutriment as well as alcohol. When the patient is beginning to recover, the light wines, especially champagne, are useful; but, in the early stages, port wine with water is one of the most useful you can give.

Stimulants must be given during the night as well as during the day in a very large number of cases. I have seen many cases where patients have died through want of having stimulants administered during the night. In young children it is very frequently necessary to awaken the patient and give stimulants. As a general rule, it is bad to wake a patient out of a refreshing sleep to give medicines; but here is an exception, and I would say that if the child sleeps more than four hours, it must be awakened and stimulants and nourishment administered.

We now pass on from the use of stimulants to the use of medicines. Here, again, we meet with a very great variety, but the most useful, perhaps, of all is the perchloride of iron. In this matter I am entirely in accord with Professor Jacobi, who has found the remedy more useful than any other. Professor Jacobi has laid it down that this medicine should be given in full doses. It is also important to give a per salt of iron, which can be assimilated with comparative ease, and probably the perchloride is the best you can use, and of it at least a drachm a day, diluted with water, should be administered; fifteen drops, well diluted with water, four times a day. The only time when I have not given the perchloride of iron has been when I have been trying the local effects of some agent that has been employed. Quinine is a very useful medicine. When the temperature is high it has a very great effect in bringing it down nearly or quite to the normal.

These are, perhaps, the most important of the constitutional remedies.

All sorts of specifics have been recommended, but I have not had much success with them. Chlorate of potash has been very much praised both as a constitutional and a local medicine. You may give it, because it cannot, in proper doses, do much harm, and it may do some good. There is one remedy which has been recommended by a gentleman whom I see before me, Dr. Beverly Robinson, and that is copaiba, which has an important effect upon mucous membranes, as possibly some of you may have had occasion to observe. But its effects are not confined to the mucous membrane of the urethra. It also produces a marked effect upon the mucous membrane of the pharynx and larynx, and that of the whole bronchial tract. I have tried Dr. Robinson's recommendation, giving the medicine in the form of pearls, which the French make, and which children take very easily, and I have administered them with great success. But I must mention that I have used it in the catarrhal form of diphtheria—the milder cases, where the exudation is not very adhesive. When the more serious cases of diphtheria are about, you get a large number of cases of catarrhal diphtheria, and in those you will find great benefit following the administration of copaiba.

We will next pass to local remedies, and here again we have a very wide field. A great many doctors may go through a lifetime and see only a few cases of diphtheria. Some meet with severe epidemics, and others with epidemics mild in character. The consequence is that an immense number of remedies are not only recommended, but the doctors say that they have not lost a case since they began to use such and such remedies. You must look upon such statements with great suspicion, and it is safe to consider that the doctors who have treated so large a number of cases with such uniform success have, at least, treated a mild type of diphtheria.

The local remedies in most common vogue are lime-water and lactic acid. Both of these remedies have one great advantage; they do not do any harm. And here I may say, gentlemen, that it is a great thing, when you are trying a remedy, to use one that does no harm. In earlier days severe caustics were used, such as hydrochloric acid, nitrate of silver, and, if the patient recovered, it was always thought that event was due to the acid or the silver. But all that has been changed. We now know that if strong caustics are used the effect is almost always to cause extension of the disease. The remedy inflames and irritates, and a false membrane is formed in close contiguity to that which previously existed. When we were suddenly told by German physicians that lactic acid was used with great benefit, and also lime-water, the news was so gratifying that we all used these remedies, which were not injurious or painful to the patient. Both have been found useful.

I ought to say here that certain solutions have been said to be useful because of the effect they produce upon the false membrane, causing it to gradually dissolve and disappear in a short time. But, unfortunately, when we have to deal with the living subject we have a totally different condition of things from that which is present in making experiments, and I have found that when using substances locally sufficient to have any effect upon the false membrane, they had an irritating effect on the mucous membrane which I was treating. Hence I returned to the use of such remedies as do not irritate, and have given up those which had a reputation for dissolving false membrane. With regard to lactic acid and lime-water, they do not have much effect upon the false membrane in the test-tube, but they certainly do seem to have considerable effect when applied to false membrane growing upon mucous membrane. It is very difficult to make accurate observations with regard to the progress of the disease from hour to hour in children; but I have had opportunity to try both remedies upon false membrane inside of the lip and upon the tongue, where I could watch the effect. I recollect three cases in which I tried the experiment with lime-water where false membrane was growing upon the inside of the lip. I treated one side with lime-water and left the other to nature, and the side treated rapidly improved, while the other remained stationary. So I believe that lime-water is useful as a local application, and in this respect I differ with my friend Dr. Jacobi, who believes that both lactic acid and lime-water have been overestimated. I strongly recommend that you should use them in every case.

We now pass on to another class of remedies, which I wish to bring to your notice, namely, those which shut out the air. This class of remedies I have introduced, and they have been employed in England to some extent. I refer to what may be called varnishing the mucous membrane with benzoin, or tolu dissolved in ether or chloroform or alcohol, and also used in various mixtures. I found as the result of considerable experiment that tolu dissolved in ether, in the proportion of 1 to 5, made an excellent varnish, and that when applied to the mucous membrane it did not cause pain or inconvenience, was sufficiently strong to hold, and did not require to be repeated. Many of these local remedies have been recommended on the ground that they destroy germs. Just here it occurs to me that I have omitted to speak of carbolic acid and salicylic acid, etc. Carbolic acid is an excellent remedy, and it has the effect, as has been demonstrated, of destroying germs, and if used sufficiently diluted it will do no harm.

All this class of remedies have been recommended upon the scientific ground that they destroy germs.

The principle upon which I have introduced the remedies which varnish the mucous membrane is, that whatever the poisonous element may be, whether a vegetable growth or some other germ, or something else, this living matter that causes false membrane to be formed, requires the presence of air. Directly you exclude the air you prevent the growth of germs which require air for their existence. As soon as possible, therefore, I apply this varnish over the false membrane; not only over the false membrane, but all around it. It is of itself to a certain extent a germ destroyer, but everything depends upon the coating of varnish being air-tight. Some of my friends, at first, found considerable difficulty in applying it, and I also had the same experience. At first I wiped the surface, to which it was to be applied, with blotting-paper. I carefully applied this absorbing material to different parts of the throat, and then immediately afterward applied this varnish. This plan answers perfectly well when you can do it; but every now and then you will find a patient who will retch a little just after the blotting-paper has touched the surface, and the mucous membrane becomes wet before you can apply the varnish. I then adopted the plan of putting a piece of lint around my finger and drying the throat with

this, and then quickly applying the varnish with a brush. This does not hurt the child, and I speak of children because nine-tenths of our cases occur among children, and it answers perfectly well; but if you should have difficulty with this, I should advise you to apply the varnish all the same. I have had several patients treated entirely by the use of the varnish, without constitutional remedies, and with good results.

I shall feel exceedingly proud if, as the result of this lecture, gentlemen shall try the effect of this varnish.

I will now say a few words with reference to the use of steam and the use of ice. Both these remedies are useful, but they should be applied in different classes of cases. In the early stages it is very useful to employ ice. It affords the greatest comfort to the patient. Let them have ice, and take as much as possible. Many young children are pleased to have pieces of ice put into their mouths. There is no doubt that it restricts the associated inflammation so often present. In the early stages it is most desirable to use ice, and you can use any amount of it without doing harm. It is only in exceptional cases, where the patient is very much depressed, and in the very advanced degrees of poisoning, where there is gangrene, that ice does harm. In many cases it diminishes the violence of the attack.

With reference to steam, it was first recommended, I think, by Mr. Prosser James, of London. Afterward it was pointed out by Oertel that steam must cure almost every case, and that it was the only remedy of any value at all, because the effect is to separate the false membrane from the mucous membrane. The fact is that when a certain point in the disease has been reached, when the false membrane is beginning to separate, steam is useful. At that time its effect is admirable. In the early stages I do not think it does any good. I think it lowers the vitality of the tissues, and that its effect is most prejudicial; but when the false membrane shows evidences of separating from the mucous membrane its effect is most beneficial. So you need have no fear of clashing heat and cold, for you use ice at first and steam afterward, when the disease has reached a certain stage. One great advantage of steam is that you can use some antiseptic with it, such as carbolic acid, salicylic acid, or any other substance you may choose. And I should advise you to use some mild antiseptic at this stage of the disease, because a certain amount of gangrene is usually present.

TRACHEOTOMY.

These, gentlemen, are the important points which I have to bring before you, and in closing I will make a few remarks only with regard to tracheotomy. The question often arises whether or not you will perform tracheotomy. I may say here that my friend J. Solis Cohen, of Philadelphia, who is with us to-day, has published one of the most complete essays on tracheotomy ever published in the English language. I think the conclusion which may be drawn from his paper is that the operation should be performed at a comparatively early stage. That is the conviction which I have. My advice is that when once there is considerable false membrane in the larynx, when inspiration is so difficult that you see falling in of the sternum each time the patient breathes, and each supra-clavicular space deepened with every inspiration, the time has arrived for tracheotomy. But you will examine the whole of the patient's thorax, and most carefully the posterior part of the chest, to see if air enters both lungs. If you find one lung seriously obstructed, I myself should advise against tracheotomy. If you find that air does not enter the lung beyond the bifurcation of the bronchus, tracheotomy will be useless. Still there are cases in which we have everything to hope if a cure can be effected. But at the same time we should consider the interests of surgery, and when I say the interests of surgery I mean the interests of the entire public, as well as those of the surgeon. If we perform the operation in a case almost entirely hopeless, we have to consider the effect produced upon the feelings of friends when a similar operation is to be performed in a similar case. The point which I wish to insist upon is, that if you perform tracheotomy you should do it directly it becomes necessary. You must not wait until the case becomes hopeless. If you do this, you will find that a large number of cases which appear hopeless will terminate in recovery. On the other hand, if you perform tracheotomy too early, you will perform it in a large number of cases which will recover without it. I think the very favorable statistics with regard to the operation, especially those furnished us from Parisian hospitals, are partly the result of the operation being performed where it should not have been performed; that is, in cases of catarrhal laryngitis, slight cases of diphtheria. In this manner you can get the most favorable statistics, but it is not a fair procedure to perform tracheotomy before there are distinct signs of laryngeal dyspnœa.

Now, gentlemen, if you observe the directions which I have recommended, I do not think you will cure all cases of diphtheria, but I think you will meet with a certain amount of success, and I also think that you will be able to rescue many patients from imminent death.

II. PARALYSIS OF THE MUSCLES OF THE LARYNX.[1]

Professor Lefferts introduced Dr. Mackenzie, who spoke as follows:

Gentlemen—I thank you for the kind reception you have given me, and am very grateful to Professor Lefferts for the opportunity of addressing so many students who are preparing for future work in laryngology. I cannot help being struck with the immense progress which has been made in this department in America, and I feel sure that you are getting ahead of us in England when I see the great number of workers and the excellent work they are doing.

Professor Lefferts, when he invited me to address you, gave me the privilege of speaking on whatever subject I might choose, and I have selected one that is regarded by many as among the most difficult in laryngology, namely, *paralysis of the muscles of the larynx*. This is a subject which can be made exceedingly complicated, and it is one which can be made exceedingly simple. A most excellent paper has been written recently by Professor Lefferts, in which he has given a system of classification that he calls excessively simple. I can only say with reference to it that it is an exceedingly difficult one. I may be allowed to say this because I am in the position of a minister who goes into his pulpit with the assurance that at present there is no one to reply. In

[1] Abstract of a lecture delivered at the College of Physicians and Surgeons, New York.

the meantime, in his excellent system he has endeavored to distinguish between every form of paralysis which may affect the human larynx. I can only say that the system reminds me of the old and somewhat primitive method of catching birds. It is beautiful and clear, but it is so difficult of application that the bird must first be caught and the salt used afterward. He claims for it that it will be the classification of the future, and so it may be, like Wagner's music, not at present fully appreciated.

Another system has been introduced by my friend Professor Elsberg, who is with us to-day. I will not say so much against his classification, because I am not occupying his chair, and can only say that I advise you not to look at it. It provides for every contingency, and Dr. Elsberg has taken into consideration every affection of the larynx. Perhaps in the remote future you may take pleasure in investigating his system.

There is another gentleman who has written upon this subject, Dr. ——. I can only say that he has introduced a system which I brought forward some fifteen years ago, most of which I have abandoned. He has written a very nice paper supporting me entirely, and it is unnecessary, therefore, for me to make any adverse criticism of his writing.

Now, having disposed of the classifications worthy of mention, I wish to direct your attention especially to *three* important functions of the muscles of the larynx.

The *first* of these, and the most important, is to guard the entrance to the larynx.

The *second* function is that of producing the ordinary voice. Of course, articulation is effected by the tongue and lips.

The *third* function is vocalization in its higher sense, perhaps not higher, as in singing, a most useful and important function.

To recapitulate, there are these three important functions of the muscles of the larynx: (1) To guard the entrance to the larynx; (2) to produce the ordinary speaking voice; and (3) to produce the singing voice.

Some of my friends will be astonished, no doubt, because I am so particular in making these divisions; but I do so for the reason that I do not wish to trouble you very much with the singing voice, for it is, after all, of only secondary importance.

What I wish to bring especially to your notice are the functions of guarding the orifice of the larynx, and thus protecting the life of the patient, and the function of producing the ordinary voice.

When a patient is brought to you supposed to have paralysis of the larynx, you are at once to consider whether he has paralysis interfering with life, or whether it is simply a question of affection of the voice. Of course the two may be combined; but the question is, What form of paralysis is this patient suffering from? If the patient has difficulty of breathing, you examine his larynx, and find that one or both vocal cords are not drawn aside in inspiration.

Many of you will recognize what the difficulty with the patient is as he enters your consulting-room. The patient who has his vocal cords paralyzed in such a manner that they are not drawn backward in inspiration, will have this peculiar difficulty of breathing. This is the most important form of paralysis with which we have to deal, and it s produced by paralysis of the posterior crico-arytenoidean muscles, or, as I have ventured to call them, the abductors of the vocal cords, because they draw the vocal cords apart in inspiration. When a patient has paralysis of these muscles, he has considerable dyspnœa. It is a curious fact that these muscles may be completely paralyzed, and when the patient is very quiet he breathes quite easily, so much so that you may think there is nothing the matter with him; but if he walks into the room you at once see that he has slight *stridor*, and cannot breathe without making a noise in inspiration. Another marked peculiarity is that when he is asleep he makes a great noise in breathing.

This form is called paralysis of the abductors of the vocal cords, and when you look into the larynx you will see a narrow chink between the vocal cords. It may look so narrow as to prevent the insertion of any substance of the thickness of an ordinary visiting card, perhaps a little wider, and it may be a little wider still.

What I have particularly to urge upon you is, that it is the most important form of paralysis with which you will have to deal. Directly upon seeing a patient in this condition tracheotomy should be performed. Patients have come to me with this form of paralysis. I have advised them to have tracheotomy performed at once, but they have gone away without it, and have died suddenly as a direct result of this condition.

On the other hand, I had tracheotomy performed upon one of my patients nearly twenty years ago. It was among the first cases recognized, and the patient is still living and wearing the tracheotomy tube.

If the paralysis is slight, you may try some other treatment, such as the use of the iodide of potassium or galvanism; but, as a rule, you must not waste time by useless treatment, and should put the patient in a condition of safety by tracheotomy. Of course this does not cure, but it is a palliative measure which preserves life indefinitely.

Now, briefly with regard to the cause of this condition. This is exceedingly difficult to determine. It may be, or it may not be, that both muscles are paralyzed. Where both muscles are affected, the condition may be produced by lesion in the brain. For example, a small clot in the fourth ventricle, injuring some of the nuclei of the pneumogastric nerve, may be followed by this form of paralysis. In that way the affection may be of central origin. Or both branches of the pneumogastric may be injured by pressure upon the neck; this is rare. It may be due to some disease of the œsophagus pressing upon both recurrent laryngeal nerves, or to some disease outside of the œsophagus producing the same effect. In the same manner, it may be caused by an enlarged thyroid gland.

I think I have now given all the conditions which may give rise to paralysis of the abductors of the vocal cords. But I must tell you that there are cases, not frequent, in which there is no apparent external cause. There are cases of myopathic origin —that is, the muscles are primarily implicated, and atrophy, the same as occurs in other parts of the body. We feel convinced that there are certain cases which originate in the muscles themselves.

I have now told you that in most cases you can determine what the cause is, and you know what the treatment is; but there are cases in which we do not know what the cause is, and until we can determine the cause we shall not be able to apply Professor Lefferts' excellent classification.

Affection of one of these muscles is less important.

It generally occurs upon the left side, and usually depends upon some disease of the aorta, such as an enlargement pressing upon the left recurrent laryngeal nerve. This is probably true in six out of ten cases, and in this way we are able to make a diagnosis in cases in which it has been overlooked by the general practitioner.

I pass now from paralysis of the abductors to *paralysis of the adductors of the vocal cords.* Paralysis of the abductors causes difficulty of inspiration; paralysis of the adductors causes loss of voice. If a patient comes to me—generally a young, hysterical woman, not always hysterical, however—complaining that she cannot speak loud, and has not done so for two or three years, I always suspect this condition. It is a curious thing to notice that if you can get such a patient to cough she will make a noise, and she will sneeze naturally, and all this she will admit. Her friends will usually say that she laughs out loud, occasionally at least, and then you will know at once that it is a case of nervous paralysis of the adductors, and that the reflex functions are properly performed. Perhaps the patient is somewhat anæmic, and as you look into the throat you may see a slight amount of congestion of the fauces; but being of a nervous temperament, she does not like to part with her aphonia, and keeps it because she regards it as a part of herself.

These cases are exceedingly easy of cure. Almost any shock will cure them. I recollect a case which I think I published many years ago in my book. A lady who had not spoken loud for many years was sitting by a window in Vienna, when, as she chanced to look at a house on the opposite side of the street, she saw a baby fall from the third or fourth story window, whereupon she gave a tremendous scream, and was at once cured. Of course it is not necessary to drop a baby out of a window every time you wish to restore the voice in these patients, but you can do it very well by applying electricity to the vocal cords. A good shock will almost always restore the voice, and if it does not restore it you may be quite certain that there is something else the matter. If you once begin with the use of electricity, never leave the patient until she speaks. You must make the current stronger and stronger until your purpose is accomplished. It may seem brutal, but never let them go until they speak.

Some of these patients lose their voice a second time, but you may be sure that if they return they never like to have the second application made quite so strong as was the first. They will say that they 'think a little weaker application will answer this time." You do not always cure these patients the first time, but it is a great point to impress upon them, not only that you have restored their voice, but that when they lose it again it can be restored. It is also very desirable to have some friend present when you restore the voice. I never restore the voice in one of these cases unless some friend is present as a witness that the voice has been restored. The object of this precaution is easy to understand.

If you do not have the convenience for applying electricity, you can use nitrate of silver, the effect of which is to cause temporary spasm. In the same way any other strong remedy which you may choose may be applied. Another plan recommended is to administer chloroform, but this is a rather dangerous method. Sometimes, however, it is not a bad measure, and the plan is to gradually put the patient into a semi-unconscious state, when she will probably speak as well as ever, and then allow her to become conscious gradually, when she discovers that she is speaking loud, and is satisfied that she has regained her voice. I hope, gentlemen, that I have succeeded in making myself understood in these few remarks to which you have listened so attentively. What I wished to bring out particularly was the two important forms of paralysis of the muscles of the larynx; that which threatens life, and that which threatens the voice. At some future time you may have opportunity to study the paralysis which threatens singing, or affects the tension of the vocal cords. When the cords are very much affected in this manner, it is seldom that you can do much good by treatment. If these muscles, the thyro-arytenoidean, are out of order, the only important thing to do is to put them at rest. I usually, however, in addition, give some mild remedies and soothing inhalations.

Original Communications.

ON CULTIVATION AS A TEST FOR MICROCOCCI.

By D. E. SALMON, D.V.M.,

ASHEVILLE, N. C.

The article of Dr. Rollin R. Gregg, on page 202 of the current volume of The Medical Record, contains a number of statements which I, as one of the humbler believers of the germ theory, cannot allow to pass uncontested. With the relation of the micrococci found, or supposed to have been found, in various parts of the body in cases of diphtheria, to the essential cause of this disease, I shall have nothing to say, since no one recognizes more clearly than myself the necessity for more extended and more satisfactory investigation of this question. To throw doubt upon our ability to recognize micrococci and other forms of bacteria by suitable cultivation, however, is a blow so plainly aimed at the most important results of all the recent researches into the nature of disease-germs, that it cannot be considered otherwise than as a direct challenge to those who have been engaged in such investigations to defend the tests which they have employed. Being, though unnamed, one of the fortunate or unfortunate few who have given practical attention to this subject, and who believe that they have isolated and cultivated disease germs, and that these, in certain cases, were micrococci, I accept that part of this challenge relating to the test by cultivation. And I do this, not because I think Dr. Sternberg unequal to the emergency, but in the hope that he will treat the question from a somewhat different standpoint—at all events, the number of investigators in this department is not so great but that all can be heard to advantage on a contested point of such importance.

In his rather remarkable article, considering the present position of science, Dr. Gregg says: "Of that 'most reliable test,' as 'conceded by all authorities,' namely, the 'cultivation' of micrococci 'in a sterilized liquid,' there is also something to be said. Here, too, we find the source of a great error, if I mistake not, when applied to diphtheria, and all for the want of proper discrimination at the outset. The sterilized liquid is broth made from the meat of a healthy animal, and heated to the boiling-point,

or beyond, to destroy the germs of vegetable-cells that may have found admission into it. This broth holds in solution more or less of the fibrin that was contained in the juices and blood remaining in the meat after being dressed for cooking. And it is this fibrin in the broth, coagulated into granules by the process called 'cultivation,' and it is these granules of fibrin thus coagulated that are held up to us as the most reliable test to prove the existence of micrococci or bacteria in the blood and in the exudations of diphtheria."

To demonstrate this emphatic assertion, the very questionable axiom is laid down that "*Everything in nature begets its kind.*" Is it possible? Do the lifeless things in nature beget their kind? Does oxygen beget oxygen? does beefsteak beget beefsteak? or does gold beget gold? Well, no; not exactly. If they did, many of us would be better supplied with certain useful commodities than we are at present. But it would seem that we are expected to accept this "axiom" in a qualified sense, for he goes on to say that "many things which cannot beget their kind nevertheless induce their kind."

I beg the reader to be very careful in applying such "axioms" to the solution of contested questions, otherwise they will lead him into the wrong way, and, before he is aware of his mistake, down he goes into a pitfall. We will willingly admit that everything that can beget at all begets its kind; in other words, living things beget their kind; but when it is attempted to apply this principle to the inanimate things in nature, I challenge the assertion at once, and demand the most convincing proof in every case to which it is applied.

We have not far to go for an example. "The least particle of the coagulum of sour milk, for instance," says Dr. Gregg, "added to fresh, sweet milk, begins at once the work that soon leads to the coagulation of that. The particle of the coagulum introduced does not in and of itself grow, or multiply indefinitely, but simply induces the change in the corresponding element, casein, of the fresh milk that originally led to its own coagulation." Now, I might, with very good reason, retort in Dr. Gregg's own words, and ask "What kind of science is this?" but being generously inclined, I shall proceed in a methodical manner to show why it is impossible for us at the present day to accept such a view of this very common phenomenon. As Carpenter's "Physiology" is quoted very freely in the article we are considering, I hope our friend will not object to this authority on certain other questions. Referring to the ninth edition (1881), page 971, we find the following: "If it [milk] be kept long enough, a spontaneous change takes place in its composition; the milk, sugar, or lactose is converted into lactic acid by a process of fermentation induced by a small particular ferment, the bacterium lactis, and this coagulates the casein, precipitating it in small flakes."

If I am not mistaken this changes the aspect of the question somewhat. The coagulum is not induced by a previous bit of coagulum, but it is produced by the action of lactic acid, which in turn is produced during the multiplication of a particular bacterium; and when a particle of this coagulum is added to sweet milk, such coagulum *per se* has no effect whatever, but it carries with it a specific bacterium which multiplies, and during such multiplication produces lactic acid, which again coagulates the casein. This illustration, then, does not support the argument for which it was intended, viz.: that a particle of fibrin introduced into our sterilized cultivation-liquid would induce the coagulation of the fibrin in that broth into granules.

"That such are the facts," however, "in regard to coagulated particles of fibrin inducing other fibrin held in solution in any fluid to also coagulate" is shown by a quotation from Carpenter which states that "just as crystals will form around a nucleus of the same kind from a solution that *would not otherwise have deposited them*, so will a fibrinous coagulum often separate from a serous fluid and form around a piece of washed clot of blood, or of the buffy coat, or of muscles or some other animal tissue placed in it, although the fluid (such as that of hydrocele), *would not have otherwise shown any disposition to coagulate.*" Then follows a quotation from Virchow, which, as it only shows that coagulation may occur very slowly, we will pass over for the present, in order to connect the final illustration with the one just quoted. It is a quotation from Carpenter, to show "the power of diseased or dead animal matter to compel the coagulation of fibrin even in the living body." It is the now well-known experiment of M. Dupuy, which by the injection of cerebral substance into the veins of an animal occasions death almost as instantaneously as if prussic acid had been administered, the circulation being rapidly brought to a stand by the formation of voluminous clots in the heart and large vessels.

"The foregoing," says Dr. Gregg, "would seem to be sufficient to settle the questions of the cultivation of the assumed micrococci in animal broth, and reproducing them within the animal system by inoculation with diphtheritic blood or membrane." There is only the question of fission to be explained and this is easily disposed of: it is only fission in appearance, and is in reality the union of two or more granules of fibrin in the first phase of the formation of a fibril.

The whole argument, then, rests upon the power of fibrin to induce the coagulation of other fibrin in solution, as apparently shown by the experiments referred to above. But science is advancing; phenomena which were imperfectly understood a few years ago are plain enough now, and inferences accepted then will hardly do to try our most important investigations by to-day. We will pause, therefore, to inquire what science says at *present* as to the cause of the coagulation of the fibrin in cases like those we have been considering.

The great question is, Does the coagulation of the fibrin in hydrocele liquids and in the blood occur by and because of the direct influence of the fibrin which has been added, or is it independent of this and the result of the action of something added in these particular cases *with* the fibrin? This is a very important question for our purpose, and one which we should not have expected a scientific gentleman of Dr. Gregg's standing, one completely "familiar with the literature of the subject," to have overlooked. And yet, when we come to examine into the matter, we find that modern scientists (what unsatisfactory fellows they are, to be sure!) have reached the conclusion that the coagulation is caused by a substance, called by them fibrin-ferment, which is liberated by the disintegration of colorless corpuscles of the blood, the cells of the cerebral substance, and to a less extent by the cells of other tissues; that there is no real fibrin in these liquids, but a substance called fibrinogen, which is changed by the so-called ferment into fibrin, and this, not being soluble, of course coagulates. (See last edi-

tion of Carpenter, also Gamgee's excellent recent work on "The Physiological Chemistry of the Animal Body.")

In hydrocele and pleuritic liquids there is frequently none of the fibrin-ferment, and hence there is no coagulation; in other cases, as in the observation quoted from Virchow, there is but a small proportion of ferment, and for that reason the fibrinogen is but slowly changed into fibrin, and the coagulation may go on for days or weeks. And here is a point which I hope will be carefully noted by the reader, as it bears directly on the subject in hand. The fibrin ferment, like other formless ferments, is incapable of reproduction, it cannot even "induce its kind," and therefore, to form a given amount of fibrin in a given time, it must be present in a certain definite proportion; if it exists in a smaller proportion, the coagulation necessarily occurs more slowly, until, when reduced to a sufficient extent, its action must entirely stop.

Having gone somewhat hastily over these general principles, to give the reader the benefit of the latest scientific investigations and conclusions on phenomena so important to this inquiry, I will now attempt to apply them to the practical work of testing the vitality and nature of granules found in the body, by the process of cultivation. And I wish it distinctly understood that I am referring to a certain definite method of cultivation—not the cultivation in a drop or two of liquid on a slide, but in tubes or flasks containing two or more drachms and capable of complete sterilization and indefinite preservation; nor of the cultivation in agneous or vitreous humor or other normal animal liquids, but in broth which has been heated to the boiling-point and filtered to perfect transparency.

Suppose, now, we wish to test the vitality of certain granules or rods which we have discovered in the blood by microscopic investigation. We take, say, a fifth of a drop of such blood, with suitable precautions to prevent contamination with atmospheric germs, and transfer it to a cultivation flask containing, say, half an ounce of sterilized broth which has been in the incubator a week or more, to prove that it has been sterilized. We place this in the incubator at the temperature of the animal body, and in about twenty-four hours we see that a remarkable change has occurred in its appearance. The liquid is no longer limpid, but has become opalescent; there is no precipitation of coagulated matter at the bottom, but there is a milkiness evenly diffused throughout. We place a drop under the microscope and, behold! our granules or rods are found to have multiplied enormously. The liquid swarms with them. If the operation has been properly performed we have a pure cultivation; that is, we do not have all the forms of bacteria or fibrin, but we have either all rods or all granules as the case may be; and if we preserve the cultivation indefinitely, though the micrococci may be aggregated into clusters and chains, they will never form rods (or fibrils).

There is, then, an important difference in the actual facts and the theory of Dr. Gregg as to what ought to occur. Instead of the forms appearing invariably as granules, and the granules aggregating themselves into rods, and the rods twisting themselves into spirals, as must necessarily occur if his theory were correct, we find with certain diseases the first form is a rod, and this rod, instead of forming a spiral, increases in length and produces spores, but does not break up into granules by fission, as would occur in the disintegration of a fibril of fibrin. In other diseases, the first and only form is a micrococcus which, though it forms chains and clusters, never produces rods or spirals. Now, how explain this difference? If we have been simply producing a coagulation of fibrin in our cultivations, the forms assumed by this fibrin, since they occur under the same conditions, should be identical in every disease. The production of coagulated fibrin, as we have seen, is the result of certain chemical and physical influences, and such influences exerted in liquids of the same composition, at the same temperature and during the same length of time, must produce substantially the same result in all cases.

Let us suppose, however, in order to dispose of other objections, that in adding the particle of blood we have added sufficient fibrin-ferment to produce enough fibrin in twenty-four hours to render our liquid opalescent. To determine if this opalescence is due to bacteria or coagulated fibrin, we take, say, one-fifth of a drop and place it into a new apparatus charged with half an ounce of a similar liquid. Now, if we consider a half ounce to contain four hundred drops, each drop in our first apparatus must contain one two-thousandth part of the fibrin-ferment in a drop of the original blood; while in our second apparatus, each drop contains but one four-millionth part of the ferment in a drop of the original blood. It is, therefore, very plain, from the laws governing the action of these ferments, that if twenty-four hours were required to produce opalescence in the first case, a much longer time would be necessary in the second; while if we carry the cultivation to the third or fourth, we should fail entirely to produce any effect because of the extreme dilution of the agent causing the coagulation.

With bacteria, now, the very opposite is the case. Our broth seems more favorable to the reproduction of these organisms than the blood, and, consequently, every drop contains a much greater number. Our second cultivation-liquid usually becomes opalescent even sooner than the first, and our third certainly as soon as the second. We are not confined to the quantities of liquid I have mentioned, however, nor to so restricted a number of cultivations; we can as easily produce a quart of virus at a time, and we can carry it through a hundred cultivations.

Having gone through all this long statement of facts to show how completely Dr. Gregg is at fault in his assertions, we may now ask what is the actual result in practice of adding a drop of blood free from bacteria to the liquid in one of our cultivation-tubes? If either the fibrin of the blood or the fibrin ferment can induce a coagulation producing anything like the opalescence of bacteria it certainly is an easy matter to establish this fact. Having again and again taken my own blood, and that from healthy and sick animals which contained no germs, and cultivated it in exactly the same manner as that containing the pathogenic bacteria, I feel secure in asserting that there is scarcely a possibility for any one of experience to mistake the results, even with the microscope left out of the question. Where there are no bacteria, there is a small amount of coarsely granular or flaky matter, which settles to the bottom of the tube and never produces that diffused opalescence which is constant in the early stages of bacteria cultivations. This precipitate exists in little if any greater amount than would be formed by the quantity of blood added, and cannot

be compared to that formed in a coagulating liquid containing much fibrinous matter in solution.

Again, it is pertinent to the question to ask how is it possible for a broth, which has been heated for a considerable time to the boiling-point, to contain either soluble fibrin or fibrinogen? Solutions of fibrin in the neutral salts coagulate at 65° C., while fibrinogen coagulates at an even lower temperature. Our sterilized liquid is then in all probability free from either fibrin or fibrin-forming substances, and, if so, it would be impossible for granules of fibrin to form in the way supposed by Dr. Gregg.

It must be admitted, however, that a precipitate can be formed in such cultivation-liquids under certain conditions; thus, the addition of solutions of acetate of lead, iodine, or glyceroborate of soda may produce a marked turbidity. With the latter agent, especially, one can imitate so closely the appearance of a micrococcus cultivation that when examined, either with the naked eye or the highest powers of the microscope, the most practised observer, if not actually deceived would at least be very doubtful in regard to the nature of the granules which he sees. But is this any evidence that we cannot learn the nature of these granules by attempting a cultivation of them? Dr. Gregg would say that if we place a drop of this liquid in a new apparatus, the granules which it contains will induce the formation of similar granules in the fresh liquid until it becomes turbid in turn. On the other hand, I have attempted to show that these granules have not the power to produce any such effect. The issue between us is perfectly plain and simple—we have appealed to science, now let us appeal to experiment.

Since reading Dr. Gregg's assertion that the formation of granules might be induced in this way, I have made a considerable number of experiments to test the hypothesis; but in no case have I been able to produce any turbidity of my cultivation-liquids by adding granules which had been formed in similar liquids in various ways, even though allowed to remain in the incubator for several times the usual period.

While, therefore, I shall not attempt, in this communication, to say that this or that series of investigations are reliable, or that any disease is or is not caused by certain forms of bacteria, I do assert most emphatically that by a proper method of cultivation the experienced investigator can determine with certainty whether the granules or rods which he sees in pathological liquids are living bacteria capable of reproduction, or whether they are lifeless particles.

If I have discussed this subject at greater length than may seem necessary to some, it is because I cannot willingly permit the dissemination of doubt in regard to a method of investigation so generally relied upon, and which has been the means of accomplishing so much. The gentlemen who have been so flippantly charged with neglecting the commonest precautions for the avoidance of error in their special field of research are the foremost scientists and investigators of the age. Who, for example, has done as much as Pasteur to dispel the mystery that has so completely enveloped the contagious diseases through the whole history of medicine? And who has done more to inspire the hope that, by patient investigation, the medical profession will one day be able not only to control but to exterminate them? Such a man is not above criticism, but it is going too far to charge him with either the most inexcusable carelessness or the grossest ignorance, unless there is a better foundation for such charges than has so far been developed.

In concluding, I beg leave to assure the reader that the "so-called science of bacteria" is not "erected upon an entire misconception and wrong interpretation of a very simple question in pathology," nor is it yet "the most remarkable and the greatest pathological error of modern times." The germ theory has come to stay, and the results to which it is leading will be the crowning glory of a century remarkable for the number and magnitude of its scientific conquests.

HYSTERIA IN THE MALE SUBJECT.

By ANSON P. SMITH, M.D.,

SANDY HOOK, CONN.

Hysterical phenomena are confined almost entirely to females. Some medical authorities have even denied its existence in other than the female sex. Hippocrates believed that the source of hysteria lay in the uterus and its appendages, and many physicians of our own day, such as Landouzy, Monneret, Villermay, and others, share his opinion. John Hughes Bennett defines hysteria as "any kind of perverted nervous function connected with uterine derangement." Numerous writers admit that it may sometimes be manifested in men, but only in weakly and feminine subjects, and then to a lesser degree. Thus Rosenthal says: "We must admit that moral causes which may often lead to hysteria in the female, may also produce the same disease in *delicately constituted* members of the male sex." He takes up the opinion which has obtained with a few others, namely, that hysteria sometimes remains unrecognized in males, many cases of the disease being diagnosticated as hypochondria. I think they are seldom, if ever, confounded. Hypochondria is a mental aberration; it has a different cause and history. We know it to be often dependent on disordered digestion, and we know also that it is a disease connected with the brain. It is characterized by illusions of the senses and morbid feelings, which may simulate any disease, hysteria no more frequently than any other. Who would look at a case of hysteria, with its muscular spasm, terrific convulsions, coma, anæsthesia, hyperæsthesia, mania, paralysis, and train of minor symptoms, and call it hypochondria? Bennett makes a strong differential diagnosis, and denies their similarity. Bright considers that one-fourth of all females are affected with hysteria, and one-half show some signs of it. Among one thousand cases he noticed fifty males. This is a larger proportion than any other author allows, as far as I have observed. Watson says: "Hysteria is almost exclusively confined to women in its paroxysmal form." Cullen wrote, nearly a century ago: "Hysteria sometimes, though rarely, attacks the male sex, never, that I have observed, in the same exquisite degree." I have questioned numerous physicians, who never saw a case in the male. I might go on and quote numberless authorities, all to the same effect as the few I have noted, but this is not a compilation, but simply the notes of a case which has interested all who have seen it as well as myself.

The patient is J—— C——, of Irish parentage, born in the United States, aged twenty-two; height, 5 ft. 3 in.; weight, 168 pounds; very stout, robust,

and healthy-looking. Is of active disposition, and very jovial, laughing, and good-humored. Occupation was freight-handling. Often worked at shovelling coal, and would do a large amount of work without suffering any physical inconvenience. Was noted for feats of strength, as in lifting heavy weights, etc. Was temperate in his habits, and very industrious. Family history good. Father, killed by boiler explosion, was very healthy. Mother living, health good. One brother, who has always been well and strong. No nervous symptoms in any branch of family, and no history of syphilis.

Patient has enjoyed excellent health until within a few months. About one year ago, while standing on the brakeman's platform near the top of the freight car he fell backward suddenly to the ground, striking upon his head. Was rendered insensible, but soon regained consciousness and went to work. Does not know what made him fall as he did not slip or stumble. Thinks he grew dizzy and then lost himself. No injury was perceptible, and no trouble of any kind resulted. About four months ago he had an attack of rheumatism. Think it was not inflammatory, as he says he had no redness or swelling of joints. Did not see him at the time. He recovered entirely in about five weeks and went to work as usual. No cardiac murmur or disturbance in circulation left after disease. Patient enjoyed his usual health for three or four months.

September 6th.—I was called to his boarding-place and was told by his friends that he had been having fits, which seemed to be fainting or sinking turns. Learned that he had been on an excursion in a steamer the day previous. He had acted strangely and became unconscious at times. Had also been violent and made an attempt to throw himself overboard. His companions thought he had been drinking, but patient denied having drank to any excess, and said he felt badly before he started away. Said his head felt very bad all day and the night before. Had several of the fits after reaching home. Slept through the night and had another of the attacks in the morning. I found patient sitting up; looked rather pale and anxious. Was not low-spirited but joked about his condition, although he talked coolly and sensibly. Complained of a severe pain in the top of his head and a numbness in his left arm and leg. Pulse 68, intermittent, temperature normal, bowels had been regular and digestion perfect. Pupils were normal and active. Found muscular power equal on both sides. Pinched the skin on his left hand, and, to my surprise, found he could feel nothing. I then took a needle and thrust it into the skin at various points, and found an entire loss of sensation at the left of median line. This was sharply defined, even to the tongue. Patient was not conscious of having any paroxysms except as informed by his friends. He simply "felt a dizziness and then something shut down over his eyes."

Gait staggering; could only walk by holding something to steady himself. When walking he would plunge forward, and on standing still would tend to fall backward. Mind clear at all times. My diagnosis was given rather guardedly, but I told him that he had some form of epilepsy, or else a tumor growing in the brain. Prescribed potass. brom. in 40 gr. doses every four hours, and a pill of ferri strych. and quinine.

September 7th.—Found his condition much the same.

September 8th.—Pain somewhat less, and convulsions less frequent. Condition gradually improved until September 12th, when I met him on the street. Said he felt nearly as well as ever.

I was called in the evening of the same day, but being out did not see him until morning. Found him in much the same condition as at first. Pain in head worse, more discouraged about his condition, and power of co-ordination less. Learned that he had been around town all the day before, sitting most of the time, talking with his friends at stores, hotels, etc. On reaching home complained of feeling tired, and soon after went off into a succession of his old attacks. Denied having drank any kind of stimulant, which statement was verified by his brother, who went to the different saloons and inquired if any had been sold him. Ordered doses of bromide to be given every two or three hours till attacks grew less frequent, and added small doses of morphia to relieve pain.

Saw patient twice daily until September 18th, at which time I called Dr. Robert Hubbard, of Bridgeport, in consultation. While examining patient, he was observed to fix his eyes and fall suddenly backward on the sofa where he had been sitting. Muscles became rigid, so that no amount of force could flex arm or leg. Was entirely insensible to pain. Occasionally gave a deep sighing respiration. Eyes closed; no opisthotonos. Body was raised once almost to a sitting posture by involuntary muscular contraction. Otherwise complete tonic spasm. No outcry at beginning of attack; no frothing at the mouth. Spasm lasted nearly five minutes, when muscles began to relax; eyes opened and patient rose up suddenly, and asked why his mother was holding him, and what we were all around him for. No disposition to sleep manifested. Dr. Hubbard, after carefully considering the facts in the case, gave it as his opinion that the patient was suffering from Jacksonian epilepsy. He had had a somewhat similar case in his practice, in which the same diagnosis had been made, and which Professor Hammond, with whom he consulted, had sustained.

In the present case, owing to hearty appearance of patient, lack of any emotional tendencies, imaginative disposition, or any of the characteristics which might be supposed to obtain in a case of hysteria, combined with his good common sense, which enabled him to discuss his condition and chances of recovery coolly and intelligently, hysteria was at once dismissed from the mind as being a probable cause of his trouble. In the form of epilepsy described by Dr. Hughlings Jackson, we have the petit mal with paralytic manifestations.

Todd describes it (the paralysis) as partly motor, partly sentient, and partly sensorial, with lasting paralysis after epileptic convulsions. He says: "We can assume no epilepsy proper but the convulsions are the symptomatic expression of a cerebral lesion. Usually there are tumors, embolisms, or hemorrhages in the artery of the fossa of Sylvius." Reynolds treats of the disease in Ziemssen at some length. I quote: "The presumption is, that with the severe spasm there is palsy. In many cases the palsy is trifling, such as numbness." He thinks the cause of fits is in the abnormal condition of gray matter.

September 19th.—Dr. J. O. Tousley, of the Manhattan Eye and Ear Infirmary, made an ophthalmoscopic examination of patient. Found a slight hyperæmia of disc on right side, left being normal. Dr. Webster afterward examined patient with same result.

September 20th.—At solicitation of patient and his friends I procured his admission into the Manhattan Hospital, under charge of Professor E. C. Seguin. It being the day on which Dr. Seguin held his clinic I accompanied patient to the city. He was seen by several physicians at the hospital before the arrival of Dr. Seguin, and the general opinion given was that he had a cerebral tumor which caused the epileptiform convulsions. Dr. Seguin, on his arrival, made a careful examination of patient after obtaining his history. Finding him unable to stand alone, he directed him to look at the wall over his head. While his eyes were fixed there he stood perfectly still. After noting this significant fact, the Professor tested the sensation thoroughly, and found hemianæsthesia complete. Thrust the needle of his instrument deeply into the tissues, drawing blood each time, without causing the slightest pain. Taking two twenty-dollar gold pieces from his pocket, Dr. Seguin pressed them firmly on the back of patient's hand within a half inch of one another. After holding them in position for three or four minutes he removed them and pressed the needle into the skin where the gold had been applied. Patient winced and withdrew his hand. Same experiments tried on different parts of arm with same results.

One coin was held on the tongue for a few minutes, and sensation found to be restored upon its removal. Dr. Seguin, after concluding his examination, pronounced the disease hysteria, and mentioned sexual excess as being the probable cause. Ordered ferri strych., and twenty grains of quinine per day, also the application of gold plates and the electric wire brush to anæsthetic side of body. Patient remained in hospital three days, when he walked out early in the morning and came home. Saw him September 24th. Pain almost entirely gone; could walk perfectly well. Sensation was restored; had no seizure since his departure from home; has steadily improved, and at present date, October 7th, is apparently in perfect health and at work.

This manifestation of hysteria is described by Dr. W. J. Morton in THE RECORD of October 2, 1880, as seen by him in the wards of the great Salpêtrière at Paris, of course in female subjects only. I refer more particularly to the symptom of hemianæsthesia and its treatment by use of metals, magnets, diapason, and static electricity, as adopted by Professor Charcot. No attempt has been made, as far as I can determine, to account for the curious influence exerted by contact of metals upon an anæsthetic surface. Dr. Seguin declares that it is not a moral effect, as he has often made the trial when the patient was unconscious of his designs and produced the same return of sensation. It cannot be the result of galvanic action, as one plate alone applied to a dry surface is followed by the same result. In reference to etiology of case in question, I would say that patient denied any abuse of sexual function. If we may believe him, why may not his disease be attributed to the effects of malarial poison? This disease takes all forms in this section of the country, where it is rife, and as quinine seemed to control the spasm at once in this case, why may not this be another instance where the drug, by its prompt action where other medicines have failed, makes the diagnosis for us?

THE FLUID EXTRACT OF TOMATO is recommended in nursing sore mouth and cancrum oris.

CASES OF CARDIAC, PULMONARY, AND AORTIC THROMBOSIS OCCURRING IN THE STATE ASYLUM, MORRIS PLAINS, N. J.

BY T. M. LLOYD, M.D.,

MORRIS PLAINS, N. J.

CASE I.—*Subacute mania—Pneumonia—Cardiac and pulmonary thrombosis.*—W. S. H——, male, aged sixty-three, admitted November 11, 1881, a very raw, cold day. Patient much exposed during journey.

November 3d.—Pneumonia both lungs; respiration rapid; pulse frequent.

November 4th.—Stimulants given through the night; respiration less frequent; pulse very intermittent and irregular.

November 5th.—Whiskey and carbonate of ammonia given freely with milk; pulse rapid, but less intermittent and irregular.

November 6th.—Took stimulants and milk very well through the night; at 7 A.M. partially unconscious and unable to swallow; pulse very weak, rapid, and intermittent; unconsciousness continued until death, at 1.10 P.M.

Autopsy, nineteen hours after death. Lower lobe of right and upper lobe of left lung hepatized; other lobes much congested. Heart: a white, tenacious, fibrinous clot was found extending from right ventricle into pulmonary artery and some of its branches. Pulmonary portion cylindrical, and about one-half the diameter of vessel. No coagula in left cavities. Calcareous deposit on one of the aortic semilunar valves. Blood very dark.

CASE II.—*Acute mania—Cardiac and pulmonary thrombosis.*—Z. O——, male, aged fifty-eight, admitted May 19, 1882. First symptoms noticed three days before; unusual silence, quickly succeeded by great restlessness and want of sleep; soon became very boisterous. Cathartic given; free action yesterday. Slept two hours last night.

May 20th.—Chloral hydrat., gr. x.; ext. hyos., fl. ℥xx.; morph. sulph., gr. ⅛, at bedtime, and repeated once during night; no sleep; very maniacal. 10.45 A.M.—Hypodermic injection morph. sulph., gr. ⅛; repeated at 11.10; fifteen minutes' sleep between 12 and 1 o'clock. 2.40 P.M.—Pulse, 156, noisy and restless; hyp. morph. sulph., gr. ⅛; twenty minutes later pulse 150. 4 P.M.—Asleep; pulse 118; respirations 13, and irregular; one deep inspiration, followed by three or four superficial ones. Respiration peculiar while patient was awake, but his extreme maniacal state made definite observation impossible. Slept one hour and a half, very much disturbed; ext. hyos., fl. ℥xx. 7.30 P.M.—Asleep; pulse, 140; respiration, 14. 10.15 P.M.—Asleep; pulse, 138; respiration, 18, with quick, sudden, rather superficial inspiratory act, but equal in duration and unvarying in character.

May 21st.—Slept most of the night. 5.45 A.M.—Respiration more frequent, but of same general character. Died suddenly at 6 A.M.

Post-mortem examination three hours later. Heart: right auricle much dilated; walls thin. A white, tough clot found clinging closely to tricuspid valve and wall of right ventricle. A cylindrical clot, same character, about one-half diameter of vessel, in pulmonary artery, with two large branches eight to ten inches long. Vessels on surface much congested. Valves normal.

CASE III.—*Paralytic dementia—Chronic suppura-*

tive pericarditis—Cardiac and pulmonary thrombosis.—C. P——, mariner, aged sixty-two, admitted June 3, 1882. History very imperfect. Right hemiplegia for over three years and cough for some time. Attempted to jump out of high window three days before admission. Two days in bed; appetite poor; restless at night. Brought forty miles by rail and stage; walked upstairs with assistance on entering building. Very weak; complains of pain in cardiac region; pulse rapid, feeble, irregular, and intermittent; respiration labored. Put in bed at once; stimulants administered.

June 4th.—Very feeble; taking nourishment and stimulants; condition unimproved.

June 5th.—Died at 5 A.M.

Post-mortem examination, five hours later. Pericardial sac greatly distended with thin, purulent fluid, containing numerous white, flaky particles floating through it. Surface of heart closely covered with granulations, in places aggregated into raspberry-like elevations. White, fibrinous clots in right cavities of heart, and cylindrical clot, same character, about one-half diameter of vessel, in pulmonary artery, and prolonged into several of its branches. Smaller branches of more recent coagulation.

CASE IV.—*Acute mania—Cardiac thrombosis.*—C. E. P——, male, aged thirty-two, admitted August 1, 1882. On Saturday, three days ago, went to circus; afterward lectured on religion on the street; next day climbed into a church steeple because St. Peter and God had told him to ring the bell; made extreme exertion, was taken down with difficulty. Has eaten nothing for two days, talks incessantly and incoherently. Placed in bed, liquid food, stimulants and hypnotics administered per œsophageal tube. During two days following admission vomited several times a very dark, thin fluid, resembling coffee-grounds, but afterward retained everything administered. Had good action of bowels; slept fairly well; talked constantly when awake, but made little muscular exertion.

August 7th, 8 A.M.—Has great pallor of skin; pulse very small and frequent, but regular. Whiskey and ammonia were increased, but condition was not improved during day.

August 8th, 7 A.M.—Pulse scarcely perceptible at radial and temporal arteries. Died at 12.30 P.M.

Post-mortem.—Large, white, fibrinous clots closely adherent to walls of both cavities of right side of heart. Size of heart and valves normal. Lungs blanched and exsanguine.

CASE V.—*Chronic mania, with increased maniacal excitement—Pulmonary thrombosis.*—W. A——, male, aged thirty-five, admitted July 14, 1882. Insane for ten years, more disturbed for a fortnight.

August 18th.—Had severe maniacal attack, succeeded by a week of tranquillity and much mental appreciation. Another exacerbation, more marked than before, very restless, and more continuously excited. Conduct evidently influenced by delusions, but expresses few of them; asserts that he is dead; at times becomes suddenly violent toward others. Recently he made a sudden spring and butted his head with great force against the wall. Temperature is increased, face dusky, pulse quick, small, and frequent. Heart clot suspected, placed in bed, liberal and frequent doses of carbonate of ammonia ordered.

August 21st.—Has continued very restless, failing in strength. Pulse, same general character. Had short syncopal attack this afternoon. Pulse at temple almost imperceptible during the evening; still able to swallow.

August 22d.—Died at 8.15 A.M.

Post-mortem.—Heart: right auricle dilated, recent coagulum in right ventricle; a small quantity of dark, thin blood in left auricle, left ventricle strongly contracted, valves normal; a markedly fibrinous clot *filled* the pulmonary artery, extending from heart to lobes of right lung. The distal ends were of more recent formation.

CASE VI.—*Chronic mania—Cardiac hypertrophy—Aortic thrombosis.*—J. McC——, mariner, aged forty-eight, admitted December 30, 1880; duration of disease and history unknown. Had hypertrophy of heart; pulse large and full, carotid and temporal pulsations visible; respiration embarrassed. Occasional excitement strongly affected the circulation and made heart's action and respiration very labored. Was not violent, and never made much muscular exertion. In December, 1881, became very feeble, and remained in bed four weeks; capillary circulation much impaired, and marked tendency to bedsores. Rallied, and was about the ward daily until August 19, 1882. Condition of mind much demented.

September 1st.—In bed and failing in strength since last date; unable to take food this morning; afterward became unconscious. Temperature high, perspiration profuse, pulse feeble and very rapid.

September 2d.—Unconsciousness, with symptoms noted above, continued until death at 9 P.M.

Post-mortem examination, eleven hours later.—Heart: left ventricle greatly hypertrophied; gelatinous clot filled right auricle, a smaller clot of same character in right ventricle. The aorta, which was exceedingly dilated, had marked concretions above semilunar valves, and contained a white, fibrinous cylindrical clot, one-fourth of an inch in diameter and nine inches long, with branches extending into right subclavian and right common carotid arteries.

These imperfectly reported cases are offered to call attention to a mode, if not often a direct cause, of death in diseases of the brain. We believe that central thrombosis, as a *cause* of death, especially in acute mania, is not sufficiently recognized. These cases occurring in our practice within a year indicate that this accident or condition cannot be very rare. Cases I., II., IV., and V. exhibit central thrombosis complicating acute disease. Cases III. and VI. exhibit the same in chronic disease.

We believe that in Cases V. and VI. the clots in the pulmonary artery and aorta, respectively, were formed where found, and that the initial point of coagulation must have been very near the heart. In the former, the clot entirely filled the vessel at its beginning, and was most highly organized in that portion; the distal branches were most recently formed. There was no clot of corresponding character in the right cavities of heart. In the latter, the diameter of the clot was small compared with the dilated vessel, and it must have been carried further into the circulation except for its attachment to the aortic wall. There was no coagulum in the left ventricle.

In the cases of associated cardiac and pulmonary thrombosis the primary coagulation probably took place in one of the right cavities of the heart.

Symptoms referable to this complication were manifested: in Case I., more than forty-eight hours; Case II., fifteen hours; Case III., two days; Case IV., twenty-eight hours; Case V., four days; and Case VI., two days before death.

The most prominent symptoms were: disturbance of the heart's action, as shown by increased fre-

quency and feebleness of the pulse in all the cases, irregularity and intermittency in two cases; inequality of respiration and interrupted rhythm in one case, where the different effects on the respiration, produced by morphia and hyoscyamus, made an interesting study.

Intercurrent syncope in one case, extreme pallor in another.

Sudden death was attributed to heart clot in two cases of acute mania where autopsies were not obtained. The first had decided embarrassment of heart's action, with rapid, very feeble pulse; pallor and cold extremities occur some days before death.

Kept in bed, alcoholic and ammoniacal stimulants given. Died suddenly a few minutes after the ingestion of food. The other, under care less than five days, very violent and maniacal, died a few minutes after making severe muscular exertion. Another sudden death occurred in a patient with chronic mania and Bright's disease, who was about the ward daily, but went to bed complaining of abdominal pain only a few hours before death.

Autopsy revealed firm, decolorized clot in right side of heart, and small abscess in kidney.

THE ELECTRIC BATH.

By WILLIAM F. HUTCHINSON, M.D.,

PROVIDENCE, R. I.

In 1874, incited by the example of Dr. Schweig, of New York, and by the work which was being done about that time in Europe in the direction of passing electric currents through the human body immersed in water, I fitted up a room in my office for that purpose. The bath-tub was made of heavy wood, entirely free from metal fastenings, and was cased in lead to prevent leakage. Into its upper and lower ends, about six inches from the bottom, were recessed carbon plates eight by twelve inches, covered with wash leather and made flush with the inner surface, which acted as electrodes, and these were connected with brass screw posts set at convenient points upon the rim of the tub. The constant current used was from a permanent series of forty two-gallon Weiss elements, which produced an even and steady flow capable of minute division by selectors and a wire rheostal. Faradism was supplied by a DuBois Reymond coil, driven by two five-gallon Smee cells (carbon-zinc). Extra carbon plates were provided for application to different parts of the body, and thus equipped I took the field.

During the four years succeeding, the number of cases treated in this manner was 87, the number of baths given 462. The majority of patients were sufferers from chronic rheumatism in an advanced stage, or from such a neurasthenic condition as precluded the usual localized applications of electricity or its more general use by sponges. In one case confidence in the bath was so great that the patient, an exceedingly intelligent old lady, went to the considerable expense of having a tub erected at her residence, where she was treated fruitlessly forty-two times before the disease gave way.

An analysis of the results was so unfavorable, as compared with those obtained from treatment out of water, as to lead to a total abandonment of the method and the removal of the apparatus from my rooms.

Chief among the difficulties encountered was the frequent systemic depression following immersion of the entire body in water for the usual time allowed for a bath, say fifteen minutes, from which enfeebled persons would sometimes not rally in hours, although the temperature of the bath was carefully maintained at such a height as was perfectly comfortable, usually about 80° F. The fatigue from completely undressing and dressing was often considerable and often objected to. When the patient left the office I discovered that a sensation of chilliness was common, followed by a stroke of cold, and the same result was noticed by myself while engaged in proving the current when the batteries were being arranged, although it was several hours before I went out.

So, finding that better results were obtained out of the bath than in it, and that patients grew heartily tired of the extra amount of trouble and fatigue attending its use, I abandoned it as a failure.

It has since been a matter of regret that my experience in the matter was so unfortunate when I have read of the success of others, and it is quite possible that some details of operating may have been neglected which longer perseverance would have taught; but I entirely agree with the editor of The Record in the value of making public failures as well as triumphs.

Progress of Medical Science.

Amyloid Kidney.—Dr. E. Wagner has investigated 265 cases of amyloid degeneration of the kidneys, and published the results of his researches in the *Deutsches Archiv fur Klinisch Medicinisch*, xxxiii. p. 416.

The causes which in these 265 cases led to the amyloid degeneration of the kidneys were as follows: Phthisis, 136; diseases of the bone, not syphilitic, 56; syphilis, 36; diverse rarer diseases (bronchiectasis, chronic ulcerative skin affections, chronic diseases of the mucous membranes, of the same nature, empyema, pyelitis, pyelocystitis, parametritis, psoas abscess, cancer, sarcoma), 36; without detectable cause (no dyspepsia, based upon amyloid degeneration? Ref.), 7. Regarding their morbid anatomy, four different varieties may, according to Wagner, be recognized, possessing also some clinical importance.

a. Amyloid kidney without alteration of the epithelium and the stroma.

b. With fatty degeneration of the epithelium, but uninjured stroma.

c. With fatty degeneration of the epithelium and fresh interstitial alterations.

d. Amyloid-atrophic kidney. This form happens mostly in syphilitic persons, and is caused by amyloid degeneration of a previously atrophic kidney.

In twenty cases, in which the urine had been more or less frequently examined, the latter was as follows: Quantity mostly decreased, rarely normal or increased at the beginning of the disease. Specific gravity generally 1.012–1.020. Color usually light and clear. Percentage of albumen medium. Sediment sparingly or absent; if present, pale. Tube-casts often for days absent, broad forms very rare. Only twice amyloid reaction demonstrable on the tube-casts. The latter hyaline or fatty degeneration, and frequently covered with white corpuscles. Twice casts with myelin drops; once epithelial casts. In one-fourth of the cases red, in

half of them white blood-corpuscles. Mostly sparingly granular detritus.

Dropsy was not an extraordinarily frequent symptom, but when present remarkably obstinate. Several times uræmic vomiting. Ten times hypertrophy of the left ventricle, but, we suppose, then with atrophy of the kidneys.

Recovery of Nine Cases of Hydrophobia.—At a recent meeting of the Paris Academy of Medicine a memorandum was read by M. Decroix, reporting nine cases of cure of hydrophobia. The Committee on Rabies made, during the year 1874, a series of experiments with medicines said to be useful for curing rabies, in which they made use of pilocarpin three times, and in every case the remedies hastened death by the violent fits they brought on. In the course of his experience M. Decroix met with two cases of rabies which did not end fatally. The conclusions arrived at by the Committee are as follows:

First.—It has been experimentally demonstrated that rabies may recover spontaneously.

Second.—Up to the present no treatment has proved to be anti-hydrophobic, and cases of cure by this or that means may be attributed to the efforts of nature.

Third.—All the means used by the Committee since 1874, comprising principally injections of pilocarpin, have hastened rather than retarded the death of the subject.

Fourth.—Those dogs usually recovered which were left without treatment, as the medicines brought on violent fits, and there is an inclination among medical men to leave men thus attacked in perfect quiet, and only practise experiments on animals. The filing down of dogs' teeth—an easy and almost painless operation—is still the most efficacious preventive of madness.

Fifth.—Rabid people left in the dark and kept quiet are not subject to fits, unless they are brought on by excitement or by ordinary medicines, and "as far as I am concerned," says M. Decroix, "I would rather be attacked by this kind of madness than many other diseases, particularly than that red chancre of smokers."—*Medical Press.*

Effects of Irritating the Encephalon.—At a recent meeting of the Paris Biological Society, M. Brown-Séquard communicated some facts to show that the movements produced by irritating different parts of the encephalon are unlike those which ought to occur, in accordance with the accepted theories concerning the cerebro-spinal motor and sensitive apparatuses. In 1879, Dr. Brown-Sequard published, in the *Archives de Physiologie*, the results of experiments which demonstrated that irritating the base of the encephalon determined movements of the limbs on the side corresponding to that on which the encephalon was irritated. If the medulla oblongata be irritated, the above result is repeated nine times out of ten; but its frequency gradually lessens when the irritation is applied higher, that is to say, beginning at the medulla oblongata, and continued toward the corpus striatum. Dr. Brown-Séquard now adds further facts. Irritating the anterior pyramid determines movements of the limbs on the side of the body which corresponds to that irritated. Sometimes the movements are limited to one limb, the arm, or the leg. He concludes that the nerve-elements, after passing to the opposite side of the spinal cord, return again, and thus produce the movements observed. Irritating the two surfaces presented by a transverse section of a lateral half of the base of the encephalon, results most generally in the occurrence of movements of one or both limbs on the corresponding side of the body.

Jaundice in Pregnancy.—Dr. Underhill, of Cincinnati, in volume vi. of the *Gynæcological Transactions*, asserts that pregnancy is a predisposing cause of certain varieties of jaundice. Icterus gravidarum is often followed by abortion, sometimes even by the death of both mother and offspring. Among the conditions which may give rise to jaundice, and which affect pregnancy especially, he names:

a, Disease of the liver and biliary ducts; *b*, constriction of the ductus choledochus and hepaticus; *c*, stenosis of same ducts; *d*, mental emotion; *e*, pyæmia; *f*, typhus; *g*, the epidemic form; *h*, malarial fevers.

These, he thinks, are the principal conditions giving rise to jaundice that are more likely to be followed by grave results in the pregnant than in the non-pregnant state. Formerly jaundice from pyæmic infection of the blood was explained by the disintegrating action of the poison on the red corpuscles of the blood. Andral, and still others, noting that pyæmic jaundice was often too intense to be accounted for in this way, claimed that there was an inflammation of the common membrane lining the duct and duodenum which would account for the tinging. Virchow is nearer right in his view that the cause of icterus in metastatic pyæmia is due to a condition of the liver similar to that existing in acute atrophy, rather than to catarrh of the mucous membrane or to the action of the poison on the red corpuscles. Catarrhal jaundice, or what is believed to be such, may shortly become malignant by reason of blood changes and by degeneration of hepatic tissue. Of this a fair illustration is given in a case reported by Dr. W. H. Parish. At the outset it seemed to be a case of ordinary catarrhal jaundice, but soon assumed a malignant type, and at the autopsy were found unmistakable evidences of acute atrophy. Indeed, Davidson, as quoted by Playfair, states that "yellow atrophy originates in catarrhal icterus, the excretion of the bile-products being impeded in consequence of pressure."

Accepting as true this theory, we have a clew explaining the fact that this disease is not only much more prevalent, but also more fatal, in the pregnant than in the non-pregnant state.

Bleeding in Heart Diseases.—Judging from recent publications, bleeding is to be restored to favor as applicable to a goodly proportion of cases in which so violent a measure has been quite successfully tabooed for many years.

In *The Lancet* Dr. Fenwick gives vent to his faith in bleeding for various cardiac affections. He states, however, that since loss of blood is a common cause of fatty degeneration, therefore it would not be wise to bleed where we have or fear this condition. He only uses leeches or cupping to remove blood directly from the cardiac region in cases where stenosis exists. He imagines that we obtain thereby more certain and more rapid results with a more accurate loss of blood than when venesection from the arm is resorted to. Still, this is a matter of such great practical importance to the patient's welfare and to our own success, that he feels bound to state distinctly some reasons for his judgment: 1. The patient and the patient's friends usually object less when leeching or cupping is suggested than when "bleeding" is proposed, and they are less

alarmed at a local application to the seat of disease than at the procedure necessary to open a vein and keep it bleeding. 2. The quantity of blood to be abstracted can be more accurately measured and controlled, and is generally much more easily obtained in cases of advanced stenosis by local than by brachial venesection. 3. Even as, like all practical men, he gives a hypodermic injection of morphia at the seat of pain, although he cannot explain why its insertion there should give so much greater and more rapid relief than when introduced into the same blood at a distance, so he cannot explain why a little blood removed from the cardiac region should afford greater and quicker relief than is derived by the abstraction of even a somewhat larger quantity from the arm. He does the former, and leaves the latter undone in these cases, because he is convinced of the great practical truth that thereby greater good is gained.

He has been astonished to find how drugs which had been given for days or weeks without apparent benefit, as soon as even a little blood has been removed, seem at once to assert their power again. Next, with regard to acute pericarditis and endocarditis, he has not had the opportunity of using venesection in many such cases, but where he has done so he has invariably bled by cupping the cardiac region, and always with good results; so successfully indeed as to make him believe that if this measure be taken at the onset of the disease, it will very often, if not always, cut the attack short, or, at least. greatly mitigate its severity.

Finally, with regard to pain, more or less severe and more or less persistent in the cardiac region, he has found nothing give such rapid and complete relief as local abstraction of blood. In conclusion he summarizes thus:

1. In cases of valvular stenosis, if dyspnœa, or pain, or urgent symptoms be present, bleeding is generally useful. It appears to be better to bleed often, if necessary, but to take only a small quantity each time, and this, by means of leeches or the cupping-glass, direct from the cardiac region.

2. In cases of valvular incompetency, if urgent dyspnœa, or cyanosis, or stupor be present, it appears best to bleed freely from the arm to about sixteen or twenty ounces, if necessary, and, if possible, once for all.

3. In cases of acute pericarditis and endocarditis the attack may possibly be cut short by freely cupping the cardiac region at once.

4. In cases of cardialgia, without any evident cause, leeching or cupping over the heart's area will probably give relief.

HEMERALOPIA IN JAUNDICE.—M. Cornillon, of Vichy (*Le Progrès Médicale*, 1882, No. 23), having referred to a paper of his own in the same journal for last year, and one by Dr. Parinaud in the *Archives Générales de Médecine* at about the same time, and to the inaugural thesis of M. Mouly, all describing cases of hemeralopia in diseases of the liver, adds three more cases, one of hypertrophy of the liver from gall-stones, one of hypertrophic cirrhosis, and one of atrophic cirrhosis. In the first case only was an ophthalmoscopic examination made; in that case the appearances in the fundus were, distention of the veins with black blood, not like venous blood, varicose dilatations on veins, slenderness of arteries, with peri-arterial and peri-papillary œdema, no pigmentation or hemorrhages. He states the hemeralopia varies with the jaundice, and is not found in liver diseases apart from jaundice. He thinks it is not uncommon, and is of grave significance. It is subject to variations and remissions. It is incurable, though in one case temporary benefit was obtained by eating raw bullock's liver.

TREATMENT OF DIABETES BY BROMIDE OF POTASSIUM.—Before the meeting of the Académie de Médecine a member read a paper on the treatment of diabetes by bromide of potassium. For the last six years the author has made this disease the object of his researches, and during that period he treated fifteen cases. He ignored entirely the classic *régime* of gluten bread, etc., being of the opinion that the disease consisted, not in the presence of sugar in the urine, but in the disorder of the organism, which produced the sugar in excess. Having had a patient who was diabetic, but who consulted him for certain nervous affections, he observed that under the influence of the bromide of potassium, of which he prescribed a drachm a day, the former disease yielded. This case gave him the idea to make experiments on rabbits, in which he produced artificially diabetes in touching the floor of the fourth ventricle, according to the method of Claude Bernard. Four grains of the drug injected into the veins caused the sugar to disappear in each case. Consequently, ever since, the author has entirely adopted this drug in the treatment of the disease in question, and always with good results. The author further insisted on the necessity of employing muscular exercise of every kind. The use of alkalies, and of iron, arsenic, quinine, according to their several indications, form part of the general treatment. There is one point worthy of remark in the above communication, and that is, the complete disregard as to *régime*, which must be beneficial to the patient in that he is relieved from the irksomeness of observing a certain imposed diet, which soon disgusts him, and what is more grave, keeps him continually dwelling on the affection from which he suffers, a fact which often leads to another malady, which, though less formidable, is not without producing a deleterious effect on the constitution, already weakened by the primitive disease, hypochondria. If further researches verify the efficacy of the observations of the learned author, the treatment of this grave affection will have made a *pas en avant*.—*Medical Press*, August 30, 1882.

TREATMENT OF BUBO.—The *Revista de Ciencias Medicas* gives the following account of a case of bubo treated according to an Italian method: The chancroid at the end of several days had almost cicatrized, and the bubo presented fluctuation. The patient was placed in the dorsal decubitus, with the extremities semiflexed. The tumor was grasped at its base and pressure exercised. With a straight bistoury of narrow blade a puncture was practised at the highest point. The instrument being withdrawn and the pressure still kept up, the contents of the abscess were evacuated *ad maximum*. A solution of cupric sulphate (30 ctgrs. to 30 grammes) was then injected in sufficient quantity to cause the abscess to regain its primitive size. After two minutes the liquid was allowed to escape and a graduated compress applied. An inguinal bandage was adjusted to keep up moderate compressure. On the following day there was slight tumefaction without pain, and the edges of the incision had united. Four days later the small wound had cicatrized without pain or increase of volume. Compression was then suspended and the patient discharged.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, October 21, 1882.

THE NEW CORPUSCLE OF THE BLOOD.

THE appearance of Dr. Richard Norris's work upon the physiology and pathology of the blood[1] seems likely to create a new epoch in this branch of the medical sciences. For some years past the profession has seen frequent references to new elements observed in the blood. Thus Pouchet described certain free nuclei which he found in the blood of ovipara. He called them *noyau de origine*, and thought them the source of the red corpuscles. Hayem, in 1877, described the hæmatoblasts in mammalian blood, and assigned to them an independent rôle in producing the colored discs. Dr. E. C. Wendt, of this city, gave an ingenious and plausible explanation of their origin. In 1878 Dr. Norris announced the discovery of an invisible corpuscle in the blood, which he said played a chief part in coagulation, and was the forerunner of the red corpuscle. Last January, Bizzozero, of Turin, also announced that he had seen in the blood of chloralized animals pale corpuscles hitherto undescribed, which corpuscles were the chief factors in the process of coagulation. Hayem has but recently read a communication before the Academy of Medicine, of Paris, in which he claims that his hæmatoblasts, not the white corpuscles, are the sources of fibrin and the morphological factors in coagulation.

At this juncture the work of Dr. Norris appears. It is a most elaborate and exhaustive one, representing the result of his five years' study of the subject in hand. He brings fresh evidence to establish the existence of his invisible corpuscle, claims that Bizzozero's discovery is no discovery at all, but a confirmation or a theft of English work, and that Hayem's hæmatoblasts are only modified forms of his own spectre corpuscle.

It is impossible here to furnish any adequate description of all the methods and arguments used by Dr. Norris to demonstrate his discovery or support the inferences which he draws from it. We must content ourselves with giving a somewhat bald description of his views.

Let one place a drop of a saturated saline solution upon the finger; then prick the finger, mix the blood thoroughly, and let it run under a cover strapped down upon the slide. There will then be seen among the red corpuscles, round, transparent spaces, which indicate the existence of the invisible corpuscles. These corpuscles, although transparent and of the same refractive index as the plasma, have a sufficient color to affect sensitive plates, and may be photographed. Dr. Norris presents numerous photographic pictures of them. He demonstrates their presence in various ways; among others, by packing, by altering the refractive index of the plasma (as in the method just described), by isolation, by osmic acid, vapor and cold, by tinting the plasma, and by staining with aniline blue.

The chief objection made to his method and to the reality of his discovery by Hart, Hayem, Bizzozero, and others is that the alleged new corpuscle is only the red corpuscle decolorized. To this objection Dr. Norris replies with a series of arguments which, we confess, it is hard to answer. In addition, he fortifies his position with many beautifully taken photographs, illustrating the results of every one of his procedures.

The general characters of this new corpuscle are as follows: They are biconcave discs, having the same size and shape as the red corpuscles. They are perfectly colorless, have the same refractive index as the plasma, are lighter in weight than the red corpuscles, and very easily diffuse and break down into granular or fibrillar fibrin. They exist in the proportion of about one to sixty red corpuscles.

In order to determine their origin and function, Dr. Norris made some new studies of the lymph-fluid and the blood-glands. Most physiologists and histologists content themselves with the statement that the lymph-corpuscles are identical with the white corpuscles of the blood. Dr. Norris gives measurements, photographs, and various other tests to show that this is not the case. The lymphatics and the blood-glands contain, he says, two kinds of corpuscles. One is a small, rough, flattened disc, a little thicker and smaller than the red blood-cells, measuring about $\frac{1}{2000}$ inch in diameter. This has no nuclei, but has a closely applied capsule, owing to which it does not stain. It contains a little dark greenish coloring matter, which it gives up when in liquor sanguinis. It corresponds to the free nuclei ordinarily described. Dr. Norris calls it the *primary*

[1] The Physiology and Pathology of the Blood, comprising the Origin, Mode of Development, Pathological and Post-mortem Changes of its Morphological Elements in Mammalian and Oviparous Blood. By Richard Norris, M.D. London: Smith, Elder & Co., 1882.

lymph-corpuscle. The second element is a larger, smooth, very delicate, non-nucleated, flattened disc, of about the same diameter as the red blood-corpuscle. It is very plastic, and easily breaks down into fibrin forms, or it may swell to a larger size ($\frac{8}{7000}$ inch). It stains very readily, and can thus be distinguished from its fellow. It is called the *advanced lymph-corpuscle.* It has been seen and described before by Hughes, Bennett, and Gulliver.

Now, Dr. Norris adduces reasons for the belief that most of the primary lymph-corpuscles in the passage to the blood lose their capsules and become the larger, soft, *advanced corpuscle,* that this latter passes into the blood and speedily becomes the invisible corpuscle. As it sweeps through the circulation it takes up hæmaglobin, and becomes finally the red blood-cell. If the blood is shed the invisible corpuscles rapidly melt down, giving up the factors which form fibrin, and being thus the essential agents in coagulation.

The primary lymph-corpuscles, for the most part, take the course above outlined. A minor number, however, are carried into the blood without losing their capsules. They are then soon developed into the white blood-cells, giving up their pigment to the plasma. The white blood-cells are uninuclear and multinuclear, the latter being simply developed from the former. In the circulation they lose their granular envelope; the nuclei thus set free enlarge, become invisible blood-discs, then red blood-corpuscles. This is the second and minor way in which the process of red disc manufacture takes place.

The "hæmatoblasts" of Hayem and the "blood-discs" of Bizzozero are, in part, the decapsulated lymph-cells before they have become invisible, and in part the developing nuclei of the white cells, or perhaps fragments, incompletely colored, of the invisible cells.

In the fœtus the process of forming primary lymph-cells, and of their development into red blood-cells is localized, being confined to the blood-glandular tissues. Even in the adult there may still remain a slight activity in this method of manufacture. It is very probable that the pigment brought into the blood by the primary lymph-cells may be one of the sources of the blood-pigment.

Dr. Norris advances so many new and radical views that he will necessarily encounter much criticism. He has, however, undoubtedly established sufficient facts to oblige a modification in the present ideas regarding the blood and the lymph.

THE FIRST RESECTION OF THE STOMACH IN AMERICA. To homœopathy belongs the, perhaps, doubtful honor of performing the first reported operation in this country for resection of the stomach. The gentleman who thus abandoned the 'transcendental globule for the knife is Dr. F. W. Koehler, of Louisville, Kentucky.

The patient was a woman, sixty-five years of age, whose health had been good until about seven months previous to the operation. She then began to suffer from various gastric symptoms indicating the presence of a cancerous growth.

The disease progressed rapidly. A tumor appeared; the patient could retain nothing on the stomach, and began to emaciate. During the last few days she was nourished by enemata. The patient was evidently in a hopeless condition and consented to have an operation performed. The only contra-indication, in the opinion of the surgeons, was the age of the patient, her strength being still quite good.

The operation was performed upon September 2d, and is thus described in the *New York Medical Times:*

"The patient being etherized was placed upon the operating table, and the abdomen having been well sponged off with pure tepid water the operation was begun. An incision through the abdominal wall, commencing a short distance below the ensiform cartilage and terminating just below the umbilicus, was made. The peritoneum was not incised until all bleeding from the abdominal incision had been arrested. This having been accomplished, the abdominal cavity was opened and we had the pleasure of seeing the tumor before us. The stomach was partially drawn from the abdominal cavity, and it was then found that the tumor involved the anterior wall of the greater curvature, extending from near the pylorus toward the cardiac extremity.

"I now made an incision through the stomach wall, when it was discovered that the cavity of the organ was occupied by an offensive material, seemingly a mixture of decomposed food and cancer tissue. Before proceeding with the excision of the tumor this material was all carefully sponged out, especial care being taken to prevent any of it getting into the abdominal cavity. Having thoroughly sponged out the stomach, the incision was rapidly extended all around the growth. During this part of the operation three arteries of considerable size were cut, but the parts were so manipulated by Dr. v. Donhoff that all the blood flowed into the cavity of the stomach, and as ligatures were at once thrown around the vessels they gave but little trouble. All hemorrhage having been arrested, the cut edges of the stomach were brought in apposition and united by about forty points of suture, silk soaked in melted beeswax and *carbolic acid* being used for the purpose. This part of the operation was very tedious, great care being exercised to get the edges accurately united. Having satisfied ourselves that all the parts were absolutely clean and that all hemorrhage, even the slightest oozing, had been arrested, we proceeded to close the external wound. For this purpose the same variety of suture that had been used in the stomach incision was made use of."

The line of sutures in the abdomen was hermetically sealed with oiled silk and collodion.

The Lister method was not employed.

The operation lasted about one hour. The patient became quite weak at times during its progress, and at the close stimulants had to be given. These revived her temporarily, but her strength failed again, and she died five and a half hours later.

A post-mortem examination showed no hemorrhage.

While we have no doubt that the operation was skilfully done, yet, considering the age and weakened condition of the patient, it does not seem to us to have been judicious surgery.

THE MICRO-ORGANISMS OF GONORRHŒA AND THEIR REMOVAL.

At a recent session of the "Gesellschaft de Charité Aertze" in Berlin, Dr. Leistikow reported the results of his experiments in regard to the above subject—micrococci found in gonorrhœal pus. These organisms were first described by Neisser in 1879, and occur, as he states, in all gonorrhœal affections of the urethra and conjunctiva without exception, as 200 cases of gonorrhœa, 6 of urethritis in females, 2 of gonorrhœal blennorrhœa and blennorrhœa neonatorum demonstrated. For the most part they are situated in the pus cells, and this intra-cellular life differentiates them from all other species. They are not present in urethral secretions of another nature, and not in the conjunctival secretions of trachoma, blepharitis, or dacrocystitis. The physician, he thinks, is therefore justified in regarding the nature of the disease as gonorrhœal only when these organisms are detected. The micrococci decrease in number in the later stage of the disease, but are found even in gleet, thus contradicting, so far as it goes, the assertion sometimes made that gleet is not infectious. Remedies, such as sulphate of zinc, acetate of lead, carbolic acid, tannic acid, so effective in gonorrhœa, destroy the micrococci after a few injections. Balsam of copaiva taken internally acts in the same way.

Corrosive sublimate, so warmly recommended by Prof. Koch as a disinfectant, arrests the development of the organisms of gonorrhœa, and is therefore advised as an excellent remedy to combat the disease. It is injected in very weak dilutions (1 to 20,000 or 1 to 30,000), and used a few days after the complete cessation of the secretion, in order to prevent a relapse.

Inoculation of gonorrhœal pus upon the urethra and conjunctiva of other animals, even the monkey, have so far, we are told, given a negative result. That gonorrhœa is a disease caused by invasion of micrococci will be only then proven by cultivating and successfully inoculating these organisms in individuals. Such cultivations are claimed to be possible, because the micrococci found in gonorrhœal secretions are so characteristic that they may be distinguished from all other kinds, because they appear in very large quantity, and lastly because all effective gonorrhœal remedies occasion the disappearance of the bacteria.

Prof. Hirschberg, in conjunction with Dr. Krause, undertook experiments in regard to the possibility of infection of the secretion of acute blennorrhœa, and they have published their results, in part (*Centralbl. f. Augenheilk.*). This secretion, without any exception, infected man without any previous injury, while pus from a lachrymal blennorrhœa only caused disease when the cornea was injured. The common pus of an abscess never injured the conjunctiva. The experimenters could always detect the Neisser gonorrhœa-micrococci in the pus of an acute blennorrhœa, but they were always missing in conjunctivitis simplex. In blennorrhœa of the new-born Hirschberg also found these micrococci. He could not inoculate the urethra and conjunctiva of other animals with these secretions, but he could produce gonorrhœa in man by inoculation with blennorrhœal secretions. He regarded, therefore, acute blennorrhœa of the eyes identical with gonorrhœa.

In the discussion following Leistikow's report Prof. Lewin emphasized the importance of the gonorrhœa-micrococci in a practical direction, to decide the question whether a soft chancre or a gonorrhœa exists, and if an existing urethritis is infectious or not. He confirmed the existence of micrococci in acute gonorrhœa. In six old-standing cases he found them only once. He had also found it impossible to inoculate animals. Injections of corrosive sublimate (1 to 20,000) he found successful, though even in this dilution they are still painful.

Dr. Gueterbook remarked that Belgian physicians used pure water as an injection, and asked whether it was the water in the weak dilution of the corrosive sublimate which acts so serviceably.

To this Dr. Leistikow replied that in his department cases of gonorrhœa had healed within four to six weeks without any injection. He had, however, tried injections of water, and thought their action to be a purely mechanical one.

Since the debate which brought out the above facts the gonorrhœal organisms have been discovered by several other investigators. It is rather the opinion, however, that they simply accompany septic pus, and have no other specific character. To those who believe that gonorrhœa is not a specific disease, this would not weaken the argument that it always has a micrococcus which carries the infection.

THE WORK OF VACCINATION IN ILLINOIS.

In the fall of 1881, small-pox being in several parts of Illinois, and steadily spreading, the State Board of Health promulgated an order requiring all school children to be vaccinated.

A circular is now issued showing the good effects of this order and requiring its enforcement for 1883. We are told that since January, 1882, over one million three hundred thousand vaccinations have been made in Illinois as the result of the Board's action, and that small-pox has nearly ceased to exist in the State. Furthermore, public schools have not been broken up by the presence of the disease in any locality where vaccination was performed, while before the systematic vaccination this frequently happened.

The Board also states that among the thousands of cases of small-pox which occurred in the State in the past year, not one is reported of a public scholar who had been properly or recently vaccinated. Several cases, however, with a large proportion of deaths, did occur among scholars who had not been vaccinated at all or not since infancy.

Regarding the statement frequently made that vaccination sometimes causes loss of arms, or even death, the secretary states that after a careful investigation he has been unable to find any such cases.

The facts thus cited are additional proofs of the value not only of vaccination, but of the good that may be done by proper sanitary supervision of our schools.

PASTEUR'S FURTHER EXPERIMENTS IN THE ATTENUATION OF VIRUS.

One of the most notable features of the recent International Congress of Hygiene, at Geneva, was an address by M. Pasteur on the attenuation of virus. Despite adverse criticism and contradictory experience, this eminent savant persists in his researches and periodically announces new proofs of the correctness of his views. His last address was listened to with the greater interest because Dr. Robert Koch, of bacillus fame, and who has announced his disbelief in Pasteur's theory, was present.

M. Pasteur gave an account of new experiments with the virus of rabies, which he had been conducting in connection with M. Thullier. Nearly a year ago he had inoculated rabbits with the saliva of a child who had died from rabies. He found that the animals took the disease and that there was always present in their blood a microbe, which, when inoculated, caused rabies in other animals. The cultivation of this organism, however, did not become attenuated, but were just as virulent, no matter how far they were carried.

M. Pasteur then discovered, what was announced some time ago in this country by Sternberg, that human saliva may prove fatal to rabbits even if it has none of these specific microbes of rabies.

Death in this latter case is due to a septic poison, which poison, Pasteur avers, resides in another microbe. This organism was cultivated by M. Thullier and himself. The former gentleman had the patience to carry the cultivation to as far as the eightieth generation. If then injected into rabbits it killed these animals, with a septic fever, as quickly as ever. In order to attenuate the virus, therefore, the experimenters submitted the cultures to the action of oxygen, as in the case of the chicken-cholera virus. The cultures were also made in a special fluid composed of two parts veal-broth and one part rabbit's blood. For it seems that these salivary organisms are dainty in their tastes and soon die in simpler mixtures. Thus fed, however, the microbes live, exposed to the action of oxygen, for forty or fifty days. During this time they gradually weaken in virulence. If taken during the last ten days and inoculated into rabbits, these animals do not die, and become protected against other inoculations of the active virus.

To the above M. Pasteur adds the results of his experiments with secretions taken from the nostrils of horses suffering with typhoid. These secretions, he claims, produce true typhoid fever when inoculated into rabbits. By treating them in a similar way to that just described he was able to attenuate the virus and thus secure immunity to the rabbits. Whether there is a promise here of typhoid vaccine the experimenter does not say.

In closing his address, he defended himself and his views against some of the attacks which had been made. When he had finished, Dr. Koch arose and said that he was disappointed in the paper, and that the facts lacked novelty. He proposed to criticise the views expressed at length in the scientific journals. The sympathies of the audience, however, were manifestly with Pasteur, who claimed that already his discovery had achieved a great amount of practical good. There had been, he said, no less than 400,000 sheep and 40,000 bullocks vaccinated against anthrax. The deaths from this disease had been reduced to 1 to 300 among sheep and 1 to 2,000 among cattle. The only unfavorable results had been in Italy, and these were due to mismanagement and the hot climate.

In this connection, we should state that Dr. E. Klein, of London, has recently made an unfavorable report upon the anthrax vaccine sold in France for use abroad. This vaccine is obtained of M. Boutroux, Pasteur's agent, and comes in tubes, each containing enough to vaccinate one hundred sheep or fifty cattle. There are two kinds: the "premier vaccin," which is used first, and the "deuxième vaccin," which is inoculated twelve or fifteen days later. Dr. Klein states that animals inoculated with this "vaccin" are not made immune against anthrax, while either the "premier" or the "deuxième" may cause fatal infection.

It seems that there are likely to be serious obstacles against the practical use of attenuated virus, however thorough its action may be proved in the laboratory.

THE GENEVA CONGRESS.

THE International Congress of Hygiene recently held at Geneva has attracted much more attention in professional circles than did any of its preceding meetings. In a five days' session there were over fifty papers read, many of which embodied the results of laborious scientific work. The substance of these papers will be duly presented to the public. Meanwhile, we will indicate here some of the more important topics discussed.

M. Pasteur's contribution to the subject of attenuated virus has been noticed elsewhere. It was regarded by the Germans as a failure, by the Frenchmen as a glorious ornament to French science.

The subject of mountain altitudes was introduced by the President, M. Lombard. M. Paul Bert stated the interesting fact that the blood of animals living in low countries absorbed from ten to twelve per cent. its weight of oxygen; while in animals acclimatized at twelve thousand feet above the sea it absorbed from eighteen to twenty per cent. its weight. High altitudes have a tendency, therefore, to enrich the blood in hæmaglobin. The prophylactic and therapeutical value of high altitudes in phthisis was conceded.

The subject of the contagion of phthisis was discussed by several members. The drift of opinion was against the view that phthisis is a contagious disease, to any such extent as to require the disinfection and isolation of its victims. M. Leudet, of Rouen, said that among fifteen widows of phthisical husbands, only two had subsequently died of a phthisis that could be considered as originating from the husbands. Among forty-one widowers of phthisical wives only three died of phthisis.

The subject of alcohol as a cause of death and disease was brought up by MM. Roulet, Challand, and others. It was stated that in Switzerland the deaths from alcohol were five out of every thousand. The annual consumption of alcohol per country was given as follows: Danes, 23 litres; Russians, 16 litres; Swedes, Germans, and Belgians, 9 to 10 litres; Swiss, English, and North Americans, 6 to 8 litres; Frenchmen, 3 litres.

The prevention of blindness is a question now exciting especial interest, and Dr. Haltenhoff, of Geneva, gave some statistics regarding it. He calculated that there was one blind person out of every thousand of the European population. This gave about three hundred and thirty thousand blind persons in Europe. The larger half of these cases might have been prevented. Dr. Roth calculated that the blind in Europe cost society 100,000,000 francs annually.

Cremation and the proper soil for cemeteries furnished topics which awakened much discussion. The Congress unanimously reaffirmed its view that cremation was a mode of disposal of the dead, the adoption of which was often needed on hygienic grounds. The proper choice of soil for cemeteries received elucidation at several hands.

No subject attracted more interest than that of the hygiene of schools. There were many reports showing the progress made in this important department of sanitary science, and the deficiencies that still existed. It was the universal opinion that sanitary and medical supervision should be constantly exercised over public and private schools.

The Congress, of whose work we have thus given a brief indication, was unquestionably a most successful one, and its influence upon public medicine can hardly fail to be widely felt.

Reviews and Notices of Books.

A TREATISE ON THE SCIENCE AND PRACTICE OF MEDICINE; OR, THE PATHOLOGY AND THERAPEUTICS OF INTERNAL DISEASES. By ALONZO B. PALMER, M.D., LL.D. Vol. II. New York: G. P. Putnam's Sons. 1882.

IN this volume, containing 856 pages, Prof. Palmer writes on "Diseases of the Respiratory System," "Diseases of the Heart," "Diseases of the Urinary Apparatus and Urinary Diseases," "Diseases of the Male Sexual System," "Diseases of the Brain and Nervous System," and "Parasitic Diseases." The first forty-five pages are devoted to physical diagnosis and "general vital symptoms of respiratory diseases," and contain a fair statement of what has for a long time been accepted and taught. The pathology, diagnosis, and treatment of particular diseases of the respiratory system follow, and, beginning with nasal catarrh, the author leads the reader into the larynx and trachea and points out the different diseases to which these organs are liable. He regards membranous croup as distinctly different from diphtheria. On these pages also the reader will find a moderately fair synopsis of the present knowledge upon these diseases. The reviewer fails, however, to discover anything which has not heretofore been published, and at the same time inclines to the opinion that a better compilation could have been made. That the author is not a systematic writer is as apparent as it was in his first volume, and the general criticism might as well be introduced here as elsewhere, that the work of a competent editor would have added very much to the value of the volume.

Naturally, the next topic is bronchitis. Here an innovation seems to have been made, and a number of pages on the microscopic anatomy of the bronchial tubes have been introduced, for which the author acknowledges his indebtedness to D. J. Hamilton, M.B., Demonstrator of Pathology in the University of Edinburgh. Bronchitis has been presented under the headings acute, chronic, and capillary. No mention has been made of fibrinous bronchitis, a disease of sufficiently frequent occurrence to find a place in a "Treatise on the Science and Practice of Medicine."

The bacillus, for some reason, has been kept out of the author's pathology, and yet the "filaria sanguinis hominis" appears prominently in the eti-

ology of "chylous urine." It is right to say, however, that the latter carries with it a qualifying sentence.

Prof. Palmer believes that "hyperæmia of the brain" has been completely demonstrated, and therefore the affection in both of its forms, active and passive, receives a full description. The space allotted us will not permit a detailed criticism of this part of the volume, or indeed of any other, and we must be content with the general statement that while it is made apparent that the author has read extensively upon the subjects therein contained, the analysis and conclusions fall short of what the general practitioner has a right to expect in a work of this character. There is an unpleasant lack of precision, which leaves the reader in doubt in many instances. As might be expected, Prof. Palmer, who has passed through several decades in therapeutics, refers to the old-fashioned measures, blood-letting and tartar emetic and blisters, but we find his recommendations guarded by a commendable degree of caution in the use of these potent agents; but it is evident that he either has considerable faith—perhaps more than the average amount—in the efficacy of drugs in the treatment of disease, or else he wishes to give the practitioner a fund of resources upon which to draw when called to treat the affections of which he speaks.

He has great faith in the power of iodide of potassium, and, consequently, it appears on the field whenever a formidable enemy is to be encountered; but we fear that his positive affection for the drug has led him to reach some questionable conclusions. For example, he agrees with Lebert in the statement that "the preparations of iodine hold the first rank" in counteracting the tuberculous process, and at the same time he seems to have overlooked the significant word contained in the following sentence, quoted from that writer: "I have for a long time used the iodide of potassium in cases with a syphilitic complication, and have been struck with its good effects and perfect tolerance." Probably no one would oppose this statement made with reference to a certain class of cases, but to apply it, without qualification, to the general subject of tuberculosis or phthisis seems to ignore the possible answer to two questions: First, Does syphilis give rise to phthisis? and, second, Does phthisis, as a rule, depend upon syphilis?

He also has great faith in the efficacy of quinine in the treatment of pneumonia. We can easily understand why this should be so, as doubtless can all practitioners who pursue their calling in certain parts of our country. But aside from the power which the drug possesses in overcoming "malarial influences," he believes that it has an almost specific effect in the treatment of this disease, and, in imagination, we can go back to the days when we heard "the old man wax eloquent" on the subject now under consideration. The work will be read with pleasure, and doubtless with profit, by a large percentage of those who help to swell the great multitude to whom Prof. Palmer has lectured during the last forty years.

Electrization of the Larynx.—Rossbach claims that the intrinsic muscles of the larynx can be feebly excited and the vocal cords moved by the percutaneous use of faradic and galvanic currents. The active electrode is placed deeply in front of the sterno-cleido-mastoid, between the larynx and sternum.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 27, 1882.

Dr. E. C. Seguin, President, in the Chair.

FIBRO-MYOMA OF THE UTERUS—MISCARRIAGE AT SIX AND A HALF MONTHS.

Dr. N. Bozeman presented a specimen expelled by regular labor pains twenty-nine days after a miscarriage, occurring in a woman six and a half months advanced in pregnancy. The tumor was probably the cause of the miscarriage. The patient, thirty-three years of age, the wife of a physician in this city, was attended by a midwife, and delivered of a fœtus six and a half months old on August 21st. Dr. Bozeman was called to see the case on September 15th, and found that the woman was suffering unquestionably from septicæmia, concerning which he learned the following history: The midwife asserted that the after-birth was thrown off in the usual manner. The case progressed satisfactorily for ten or fifteen days, but the patient not getting on well, a physician was called, who found a mass in the cavity of the uterus, which he supposed to be a retained placenta. This was on the seventeenth day after confinement. He introduced a vulsellum forceps into the lower portion of the mass and used very violent efforts for its extraction, but the instrument tore out and nothing further was done toward its removal. After a few days, fever supervened, symptoms of septicæmia developed, and the patient went on from bad to worse, until the time when Dr. Bozeman saw her in consultation. He then found that the mouth of the uterus was slightly dilated, that the end of the tumor was in a ragged condition, that the patient's temperature was 102.5° F., and the pulse 130. The uterus was quite large, there was a sanious discharge and considerable abdominal tenderness, with tympanites. On the following day ether was administered, and he introduced two fingers into the cavity of the uterus; was able to explore the tumor to the extent of three or four inches, and found it perfectly free, except at its front portion, where it was attached to the anterior wall of the uterus down to within one inch of the internal os. Not succeeding in effecting manual dilatation a large Barnes dilator was introduced and allowed to remain from four to six hours. By this, the os was considerably more dilated, yet nothing in addition was learned by exploration. The prostration of the patient was very great, and Dr. Bozeman determined to discontinue any further operative procedure until her strength could be somewhat improved. She was then removed to the woman's hospital, and it was ordered that she receive vaginal injections of a two per cent. solution of carbolic acid and rectal alimentation. This treatment was continued for three days. Soon after beginning the disinfectant injections labor pains came on. The patient seemed to be gaining in strength, and the treatment was continued, no unfavorable symptoms developing until twenty-nine days after the miscarriage, when violent labor pains set in and the tumor was expelled, presenting a ragged surface of attachment. The specimen was about six inches in length and three inches in diameter, and exhibited at one point the surface where it had been attached to the anterior wall of

the uterus. It had been examined by Dr. Welch, Pathologist to the Woman's Hospital, who reported that it was a fibro-myoma of the uterus. After the expulsion of the mass the patient's condition became more favorable and improvement had gone on, and at the present time the temperature was 99° F., and her pulse 98.

Dr. Ripley asked Dr. Bozeman if he delayed interference on account of the weakness of the patient.

Dr. Bozeman replied that he did, and also on account of the difficulty of dilating the os. Besides, there were no symptoms, such as hemorrhage, which indicated immediate interference.

Dr. Ripley thought it would be a fair question to raise as to whether the danger from septicæmia was not greater than from operative interference. In regard to dilating, as a general rule, in these cases, the hand alone is sufficient to dilate the cervix for all the manipulation necessary. In quite a number of cases, although the patient was very much prostrated, he had dilated the cervix with the hand, washed out the uterus, and recovery had been rapid and satisfactory. The question was, therefore, whether the delay in Dr. Bozeman's case was justifiable.

Dr. Bozeman replied that Dr. Ripley's suggestion was a very good one, and that his views also were quite correct. He had the same view himself, and thought it would be possible under chloroform to dilate sufficiently to permit the removal of the mass in the uterine cavity, but after making sufficiently violent efforts to do so, he was only able to get two fingers into the uterus, and then, having in addition tried the Barnes dilator, it seemed to him that further interference at that time was not justifiable. In addition, there was the fact that strong traction had previously been made upon the tumor by means of the vulsellum forceps without any effect. He therefore thought it more advisable to wash out the necrosed tissue with an antiseptic solution and build up the patient preparatory to subsequent dilatation and removal of the mass, and the result undoubtedly justified the plan of treatment. For septicæmia began to disappear immediately after antiseptic injections were begun, and the patient's general condition began to improve after the use of these injections and rectal alimentation. If hemorrhage had resulted after his first examination, under these circumstances, the question would have come up as to the best mode of removing the mass, and he thought the only chance would have been in the performance of hysterectomy.

ORIGIN OF CYSTS OF THE KIDNEY.

Dr. Heitzmann presented microscopical slides illustrating the development of renal cysts, accompanied by the following remarks:

"Dr. Jeannette B. Green, a student for several months in his laboratory, had devoted special attention to chronic nephritis, and had succeeded in proving how cysts in the kidneys, such as seen with both catarrhal and croupous (parenchymatous) nephritis, are formed.

"Neither of the former views, that cysts arise from tufts or from uriniferous tubules, is satisfactory. Cysts are often found on the surface of the kidneys where there are no tufts, the same as in the pyramidal substance. In cirrhotic kidneys we not infrequently meet with capsules containing a shrivelled or compressed tuft and an albuminous liquid, but in no instance has dilatation of the capsule been observed sufficiently marked to allow the diagnosis of a cyst. Neither could we understand how, by simple dilatation, uriniferous tubules could reach the size that we observe in cysts. The way in which cysts are formed is as follows: first, the interstitial as well as the epithelial tissue of the tubules breaks down into inflammatory or medullary corpuscles, and thus an embryonal tissue is produced, sometimes occupying large territories of both the cortical and the pyramidal substance. Next, a transformation of the medullary into myxomatous tissue takes place, marked by the presence of a light, nearly homogeneous basis substance, which is traversed by nucleated bioplasson strings. In further growth these delicate strings perish, and a cavity is formed filled with an albuminous liquid. Around the cavity delicate fibrous connective tissue is developed, the inner surface of the wall of the cyst being lined with flat endothelia. From all evidence those medullary corpuscles that have sprung from former epithelia of the uriniferous tubules are the only ones fit for a transformation into first, a myxomatous tissue, and later, by liquefaction, into cysts. From what I have seen in kidneys, ovaries, and in the skin, I would consider this manner of formation of cysts as the only one which occurs. As to cysts of the liver, my experience is too limited for a positive statement; there are good authorities claiming that from bile-ducts, by simple dilatation, cysts may originate."

SARCOMA OF THE UTERUS AND LIVER—DOUBLE HYDRONEPHROSIS.

Dr. R. W. Amidon presented specimens accompanied by the following history: The patient was a woman sixty-two years of age, a widow, mother of five or six children, who first consulted him in September, 1881, for œdema of the right leg. She had always been very healthy up to a short time previously, when she began to suffer from swelling of the feet and ankles, chiefly upon the right side, accompanied by dull pain and irregular discharges of dark fluid from the vagina. She had never had headache or backache, or any urinary trouble. There was no evidence of an abdominal tumor. There was slight abdominal tenderness, especially in the right iliac region and along the course of the iliac and femoral veins. The entire right lower extremity was œdematous. The urine was high-colored, but contained no casts, and was otherwise normal.

September 12th, three days after her first visit, Dr. Amidon made a vaginal examination. Found the uterus low down, firmly fixed, the cervix having a rigid, cartilaginous feel. There was also an indurated mass above Poupart's ligament, but there was no induration of the femoral (?) glands. He diagnosed cancer of the uterus. The patient lived until July 10, 1882. At the autopsy he found the pelvis filled with a morbid growth, which had been submitted to a microscopical examination and found to be sarcomatous in character. There was, besides, sarcoma of the uterus and of the pelvic organs in general, sarcomatous nodules in the liver, and abscesses. In addition, there was induration and enlargement of the mesenteric glands. The spleen was riddled with small abscesses. He also found double hydro-nephrosis which had not given rise to symptoms. Microscopical examination of the primary location of the sarcomatous growth, which was in the uterus, showed that it possessed no special peculiarity; but the formation of abscess in the liver showed how the epithelium of the liver breaks down and makes pus, which had already been re-

ferred to by Dr. Davis in an article published in the *Archives of Medicine.*

This condition Dr. Amidon illustrated by means of microscopical slides, and also exhibited microscopical specimens of the sarcomatous growth.

Dr. Heitzmann asked Dr. Amidon what his experience had been concerning cancer changing into sarcoma. He said he was first struck by this appearance in primary cancer of the uterus, where an enormous sarcomatous growth had followed cancer, and he had since been able to trace, in quite a number of cases, this same transition, so much so that when he met with large sarcomatous tumors he sought to determine, if possible, whether the original growth was not cancerous in character.

Dr. Amidon replied that he was unable to trace any such transition, although at the time he made his second examination of the patient he diagnosed cancer of the uterus.

Dr. Ripley asked if he understood Dr. Amidon correctly in the statement that the hydro-nephrosis was not attended by symptoms?

Dr. Amidon replied that no urinary symptoms were present until the patient became so weak that she ingested scarcely any fluid. He examined the urine several times and never found any pathological condition. He thought it was the general rule for hydro-nephrosis, particularly when unilateral, to go without recognition until at the autopsy.

Dr. Ripley remarked that there were cases upon record where both ureters had been occluded without producing symptoms. There was a case in this city in which the patient did not pass any urine for twelve days. Ebstein mentioned a case where no urine was passed for two weeks. In the case which occurred in this city there were no urinary symptoms until nearly the close of life, which, he thought, was rather remarkable; whereas, in anuria from nephritis severe symptoms set in early. As a rule, an obstruction of this kind may exist for a long time without giving rise to any grave symptoms.

Dr. Amidon remarked that the only symptom which pointed toward uræmia was somewhat persistent vomiting, but he had attributed that to the use of morphine, of which the patient was obliged to take large quantities.

Dr. Ripley suggested that it would be a fair question, then, as to whether the vomiting was uræmic or due to the influence of morphine.

Dr. Amidon said that it would.

DIASTASIS OF THE UPPER EPIPHYSIS OF BOTH HUMERI.

Dr. Van Santvoord presented specimens removed from the body of an idiot boy, six years of age, and accompanied by the following history: He had been treated on two or three occasions for bronchial trouble. He was able to move his limbs, but had never been able to walk; had always been confined to the bed. About six weeks before death one of the attendants directed the attention of the house-physician to a swelling on the child's arm. The house-physician on examination found that the entire right shoulder and arm were much swollen, and that there was a slight amount of ecchymosis in the axilla. The limb remained œdematous and continued in about that condition until the child died. The swelling was fluctuating in character and the child had moderate fever, the temperature, however, never exceeding 100° F. The house-physician suspected the existence of an abscess, but did not feel prepared to open the swelling because there had never been any redness or heat, and he was rather doubtful concerning diagnosis. He therefore contented himself with making an attempt at aspiration, but the aspirator withdrew nothing except a small quantity of blood, and as the child was evidently soon to die no further attempt was made. The patient died of exhaustion. At the autopsy the right arm presented the appearance already described, and cutting into the swelling Dr. Van Santvoord opened into a sac filled with clotted blood. In the midst of the clot he found embedded the upper extremity of the humerus. The head of the bone was in the socket and perfectly healthy, except upon the under surface, where it was somewhat eroded. There had been no history of traumatism. The under surface of the humerus was covered with badly developed granulations. He was unable to detect injury of any blood-vessels. He found that the head of the opposite humerus was loose, and on cutting into that joint, found about an inch and one-half of the bone eroded, but the joint contained only a small quantity of blood. In the absence of any evidence of inflammatory process he concluded that there had been injury which had not been reported. There was separation of the upper epiphysis of both humeri, and the amount of hemorrhage was probably six or seven ounces. He examined the other joints of the body but did not open them, as these two were the only ones which seemed to be affected.

Dr. Ripley asked if the child was syphilitic.

Dr. Van Santvoord replied that he was unable to answer the question. The condition of the brain, however, was somewhat interesting. There was no external malformation of the head, but on the left side there was total loss of a large number of convulsions, and the space which the convolutions should occupy was occupied by a sac that communicated with the lateral ventricle.

Dr. Jacobi said he had seen a number of such cases, but in the cases which he had observed the spontaneous separation had been attended with acute osteitis, and always attended with suppuration. In this instance there was no evidence of suppuration, but on the contrary there was a great deal of hemorrhage, and therefore the specimen looked as if it were of traumatic origin, and probably the case was one of murder.

Dr. Ripley thought the case was very similar to two which he had seen and in which there was separation of the shaft of the bone from the epiphysis, due to syphilis, and in these cases by keeping the bones in apposition they finally united firmly. One of these cases was seen by Dr. Keyes, who regarded the lesion as syphilitic. He thought the hemorrhage might have been simply a coincidence or accidental, resulting from the rupture of some small vessel, but in other respects the case corresponded very closely with the syphilitic cases to which he had already referred. Besides, the malformation in the head to which Dr. Van Santvoord referred also pointed to syphilis.

Dr. Jacobi suggested that the condition of the brain pointed to arrest of development rather than to syphilis.

Dr. Ripley thought it possible that the arrest of development might be due to syphilis.

Dr. Briddon was inclined to regard the case as one of traumatism, and of old date, but probably associated with a recent accident which caused loss of blood. To him there seemed to be no evidence of epiphysitis. He thought the most frequent manifestation of hereditary syphilis was overgrowth of bone.

Dr. Ripley thought that the argument presented by Dr. Briddon had no special weight, that is, that such cases are not very common, for it was sufficient to know that they do occur; and inasmuch as they might occur, this might have been one of those cases of which there are several upon record. He himself had already seen two cases, so that they were not so very rare after all.

Dr. Briddon said he was willing to admit disease of the epiphysis caused by syphilis, but he believed they were rarely, if ever, associated with diastasis.

Dr. Ripley said that was the very point which he wished to make, that there was no pain, as only slight inflammation attended the condition. This was also a peculiarity of syphilitic dactylitis, which might occur without giving rise to only very slight pain.

Dr. Briddon remarked that pus was scarcely ever found in connection with dactylitis.

The President asked if the cerebral malformation was bilateral.

Dr. Van Santvoord replied that it was unilateral. The child had not been examined carefully, and the ante-mortem history was so defective that it was almost worthless. He further remarked that in looking up the literature of the subject, he found a single case reported in the "Transactions of the London Pathological Society for 1876," by Mr. Thomas Smith, as a case of "Hemorrhagic Periostitis." In that case there was complete separation of the femoral epiphysis, the tibial, and partial separation of the fibular epiphysis upon both sides, and also separation of the epiphysis of some of the other joints, especially the shoulders, which were not opened. The periosteum was much injected. There was some hemorrhage in the muscles attached to the shaft of the femora, and there was a layer of blood between the shaft of the bone and the periosteum, but there was no suppuration whatever. The child died of exhaustion. In that case also the patient complained of but little pain on being handled. Although the disease had lasted two months, the shafts of the bone were smooth, differing from the appearance of the humerus in his case, where there was considerable erosion.

PERFORATION OF THE INTESTINE.

Dr. Van Gieson presented a specimen of perforated intestine which was removed from the body of a man aged sixy-two, who, until the symptoms immediately preceding his death, had been in the enjoyment of very fair health. He had had for many years upon the right side a reducible inguinal hernia, which had been readily controlled by means of a truss, and, so far as he was able to learn, had not given rise to special trouble during life. He had occasionally had attacks of rheumatism, not sufficiently severe to confine him to bed, but simply much interfered with locomotion. He had not been under the attendance of a physician for some years. His occupation was that of a waiter, but during the last four or five years he had lived a life of inactivity. On the previous morning he arose and said he felt better than usual, and he thought he would make himself somewhat useful by visiting his son's grocery store and doing some light work. He accordingly walked to the store, went down into the cellar to arrange some empty barrels, none of which had any very great weight, and while rolling an empty kerosene barrel he was suddenly seized with acute pain in the bowels. His cries attracted the attention of his children in the store above, and when they reached the stairs they found that he had nearly gotten to the top of them, and was complaining of intense pain. There was a marked tendency to syncope, which was overcome by a small dose of brandy, and the pain soon left him. He sat down for a little time, and then went home. After mounting the stairs at the house he was again taken with extremely acute pain. Meanwhile Dr. J. A. Jenkins had been called, and when he arrived he examined both sides to ascertain with reference to hernia, for he supposed that the case was one of some form of strangulation; but the old hernia was so reducible, and there was no evidence of hernia upon the opposite side, that he was at a loss to account for the symptoms. Morphine was administered according to circumstances, and under the influence of opium the pain disappeared to a considerable extent. About five o'clock in the afternoon there was a slight natural movement from the bowels. About six o'clock the doctor saw him again, and found that the pain was recurring at intervals, but was not severe. He was sent for at nine o'clock, at which time the patient had been taken with vomiting for the first time, and there was slight evidence of tympanites. The vomiting went on; the material ejected had a foul smell and a suspicious color, and Dr. Van Gieson thought it was probably stercoraceous. At ten o'clock the pain was very severe. Up to this time there had been no elevation of temperature, but now the thermometer stood at 99° F. On the supposition that there might be some irritating matter in the bowels, an injection of warm water was given in the course of the night, but not very much fecal matter was passed. On the following morning the vomiting, which had continued throughout the night, still remained incessant, and a few hours afterward the patient died. At the autopsy the body was found well nourished and muscular. Upon opening the abdomen the lesion was reached at once. About a pint and a half of serum was found in the abdominal cavity, and a small portion of the ileum immediately presented itself at the opening, and in this presenting portion there was an opening in the gut, which extended entirely through the intestinal walls. The gut was not agglutinated to other coils of the intestine, nor adherent anywhere by adhesive inflammatory deposit, but all over the peritoneal surface there was abundant evidence of recent inflammation. The gut in the neighborhood of the lesion was strongly congested, and here and there there was an effusion of recent lymph. When the edges of the opening were examined they were found to be cleanly cut. The question was as to the origin of the opening, and this to some extent was explained by the beginning of a process which would terminate probably in the same result if the man had lived. A little to one side of the complete perforation there appeared to be a solitary follicle, which had taken on a low grade of inflammatory action characteristic of follicular inflammation of the intestine. In the one instance the inflammatory process had been completed and perforation had taken place, and in the other it was incomplete, but probably would in time have produced the same result. Dr. Van Gieson was of the opinion that Nature had made an attempt to seal the opening, which had existed for a long time, and that it had been kept partly plugged up by adhesive material. The minute opening had probably permitted a slight escape of the contents of the intestine, and the exercise in the cellar may possibly have opened

the gut and allowed a sudden escape of intestinal material, and thus gave rise to the shock, collapse, and death.

Dr. Wendt thought if the intestine could have been examined throughout its entire length there would probably have been found evidence of follicular inflammation at different points.

The President asked if there was any evidence of cardiac disease, as the lesion was suggestive of those which come from plugging of an artery, and not unlike that which occurs in the stomach as a result of embolism and thrombosis of the smaller vessels.

Dr. Van Gieson replied that there was no evidence during life of the existence of cardiac disease. They were not permitted to make an autopsy with reference to any of the organs of the chest.

Dr. Jacobi remarked that there were two places in which there was superficial erosion in the neighborhood of the place in which perforation existed.

Dr. Briddon asked Dr. Van Gieson if he supposed the perforation had taken place before the man had made the exertion in the cellar.

Dr. Van Gieson said that he could not account for the inflammatory condition, which was evidently quite recent, upon any other hypothesis. That such an amount of inflammation as this could be developed within twenty-two hours he thought was quite impossible.

Dr. Ripley referred to a case which probably Dr. Jacobi would recollect, in which a boy died of peritonitis without any symptoms at all except those of parotiditis, or ordinary mumps. But in cases of perforation the rule is that the inflammation is limited as compared with the gravity and rapidity of the symptoms which follow. In cases of typhlitis a fatal result follows pretty rapidly, although the area of the inflammation is quite limited.

AMYLOID LIVER.

Dr. E. C. Wendt presented a specimen accompanied by the following history:

Wm. A——, aged thirty-eight, a native of England, blacksmith, was admitted to the St. Francis Hospital in July, 1882. No hereditary taint. Some two years before admission, he developed several abscesses over the region of the sacrum, which healed poorly, leaving five fistulous openings. Syphilis was not present. About a year later two new abscesses formed in the lumbar region on the right side. On admission he presented an appearance of marked cachexia, with great emaciation and feebleness. The previously mentioned fistulæ were still discharging large quantities of thick pus. The liver was prominently enlarged, extending to the umbilicus. During his stay in the hospital it continued to grow quite rapidly. The other organs were found to be normal, barring some enlargement of the spleen. Examination of urine negative. Its specific gravity was 1,010. No ascites occurred in the course of his illness. Three weeks before his death an intractable diarrhœa set in, and he died of exhaustion on September 25th. The post-mortem examination, made seven hours after death, revealed the usual atrophy and anæmia of long-continued wasting disease. The liver was found to be enormously enlarged, owing to the presence of extensive amyloid degeneration. Its weight was *fifteen pounds*, that of the patient being only about seventy. It had pushed the diaphragm up to the third rib, the right lobe extending down into the pelvis. The left lobe reached below the anterior superior spine of that side. In the spleen incipient amyloid changes were visible, but the kidneys showed only the usual yellowish gray appearance of the cortex, due to granulo-fatty alterations.

Dr. Wendt further remarked that in cases of this kind it was the rule to find the liver presenting a pale grayish hue, but in this instance it was of a brownish color, showing that all the lobules were not completely infiltrated, and that there was still a moderate amount of blood in the organ. The bile-forming function of the liver had not suffered, and the gall-bladder was seen to be well filled with the normal secretion. The case was a somewhat unusual one, on account of the very rapid hepatic infiltration, leading to such enormous dimensions of the organ, while the spleen was only slightly implicated, and the kidneys not at all.

Dr. Heitzmann asked concerning the original cause of the suppuration.

Dr. Wendt said he was unable to ascertain the cause, as there was no history of injury or of syphilis. No caries had been developed. It was presumable, however, that there was caries, although it had not been detected.

The President asked if the spleen and the kidneys had been examined by tests for waxy degeneration.

Dr. Wendt replied that they had. There was but slight involvement of the spleen, and none of the kidney.

Dr. Jacobi suggested the possible existence of interstitial hepatitis, and asked if there was any ascites.

Dr. Wendt answered that the specimens had not been examined microscopically, but there was no ascites.

CARCINOMATOUS PEDUNCULATED TUMOR ATTACHED TO THE INNER WALL OF THE UTERUS.

Dr. Ferguson presented a specimen, removed from the body of a woman sixty-five years of age, consisting of the uterus, which contained a tumor that involved nearly its entire fundus, projecting into the cavity, dilating the os, and forming a kind of polypoid mass. A microscopical examination had revealed epithelium upon its surface, such as lines the uterine cavity, and the tumor itself was made up of very large alveoli, packed with small cuboidal cells, and surrounded by a small amount of stroma. There were no carcinomatous growths in the other organs of the body, and none of the mesenteric glands were enlarged. There was a moderate amount of interstitial parenchymatous nephritis. So far as the history could be obtained the tumor in the uterus had not given rise to hemorrhage.

Dr. W. M. Carpenter asked Dr. Bozeman if intra-uterine polypoid growths, carcinomatous in character, were of frequent occurrence.

Dr. Bozeman replied that he had not seen such a case.

In answer to the same question Dr. Heitzmann replied that he had not met with such a tumor.

The President asked Dr. Bozeman whether it was customary to make a microscopical examination of uterine polypoid growths before their removal.

Dr. Bozeman thought it was not the general custom unless there was a strong suspicion of the existence of carcinoma.

Dr. Heitzmann asked if it was out of the question that this tumor was cancerous.

Dr. Ferguson replied that it might not be cancer, but it was a tumor which consisted of quite small cuboidal cells, which filled up alveoli that were sep-

arated from each other by thin partitions made up of connective tissue, and from a somewhat rapid examination he reached the conclusion that it was carcinoma, because of the large alveoli separated from each other by distinct walls of connective tissue and filled with cuboidal cells.

Dr. Heitzmann remarked that in making microscopical examination of myoma and fibro-myoma of the uterus, cross sections exhibited an appearance which very closely resembled small cuboidal epithelial cells.

Dr. Ferguson thought that a gross examination of the tumor would exclude fibro-myoma, because it was entirely too soft for that form of neoplasm.

The specimen was referred to the microscopical committee.

VESICAL CALCULUS.

Dr. J. Lewis Smith presented a specimen removed from a boy eight years of age, with the following history: The patient had been perfectly well up to a few days previously, when he began to complain of some pain in passing urine. On September 16th he had not been able, although he had attempted several times, to pass urine, and on the evening of the same day he succeeded in passing a small quantity, and it was stated that he was entirely relieved. The case being one of considerable interest he thought it well to make an examination, and the result showed that it was well that he did, because he discovered a calculus lying in the meatus within the glans-penis, and as he pressed upon it it protruded from the meatus. But it was so tightly fixed that in order to remove it he was obliged to use a proper pair of forceps, and then succeeded only with considerable difficulty. The case possessed additional interest for him, because it was the second one which he had encountered within the last six months in which obstruction to urination had been caused by a calculus that had lodged in the urethra in the glans-penis. In the first case the calculus was not as large as was the specimen presented, and at his visit it was protruding somewhat so that he could see it. In the second instance, however, the calculus protruded only after making slight pressure upon the glans penis, and by so doing he was enabled to get hold of the stone with the forceps.

The specimen was referred to the microscopical committee.

Dr. Briddon remarked that several years ago he was called to see a child under similar circumstances, suffering with retention of urine. He introduced a catheter and felt a calculus in the perineum, and with great difficulty he got a small instrument beyond the obstruction and emptied the bladder. He arranged for its removal by operation on the following day, and Dr. Gurdon Buck was invited to be present. On their arrival, and after drawing the foreskin back, they found the calculus impacted in the meatus. This was removed and then a sound was introduced into the bladder and another calculus was felt, which he proceeded to remove by lateral lithotomy, and found it to be an inch in diameter. He thought it was proper in all these cases to explore the bladder with the sound to see whether there were any more calculi present.

UNDESCRIBED ERUPTION OCCURRING DURING THE USE OF BROMIDE OF POTASSIUM [ULCUS ELEVATUM].

The President presented microscopic sections with the following history: Annie L——, aged twelve, was brought to him at the Manhattan Eye and Ear Hospital on February 24, 1882, to be treated for peculiar attacks which he considered epileptic.

The child's health seemed good; she was fairly well-colored, and her skin was everywhere normal.

She was put upon regular bromide treatment, taking from three to four grammes a day at various times. The indications of coarse cerebral disease was so strong that he also gave her .75 grammes of iodide of potassium three times a day, and applied a few blisters behind the ears.

The epileptic attacks were at once controlled, and the child seemed to bear the medicines well. Owing to some annoyance at having to wait very long one day, the mother ceased bringing the child to the hospital; this was some time in March, and there was then no bromism or eruption.

Rather accidentally, Annie again came under his care in June, and upon inquiry he found that she had had private treatment since leaving the hospital, and had taken bromide of potassium only (no iodide). She was somewhat stupid from the bromide, but the amount given was impossible to ascertain. There was almost no facial acne; the child's color was clear and healthy. The mother, however, stated that since leaving the hospital clinic the child's legs had become the seat of very painful sores. The bandages were removed from both the child's legs, and he saw ulcers distinctly elevated above the surrounding healthy skin. The outlines of the sores were very irregular, varying in vertical width from three to eight centimetres; the largest surface of each sore being on the fibular side of the leg. The edges were sharply defined and nearly vertical. The surface of the sores, raised two or three millimetres above the healthy skin, was covered with brownish black scabs and a most offensive sanies. On removing some of these scabs a rough granulating surface, easily bleeding, was revealed. He used the word granulating, but the appearance was that of a firmer, more villous, in places almost papillomatous formation, than the delicate translucent and uniform surface of ordinary granulations.

The mother stated that this local trouble began in April, while using the bromide prescribed by the physician she consulted after giving up the hospital. At first the right leg was affected with large pimples or boils, which "broke," ulcerated, and coalesced into an open sore. In about a fortnight the left leg was similarly affected. Dr. Seguin directed that the ulcers be gradually cleaned of scabs by frequent washing, and that a strongly carbolized ointment be used twice a day. The dose of bromide of potassium was fixed at two grammes night and morning. The treatment was not carried out well, and on July 28th he gave her ether, and after removing nearly all the scabs from the left ulcer, applied to it Paquelin's cautery quite freely, and ordered a carbolized lotion for a few days, to be followed by applications of balsam of Peru ointment. At the same time he cut out a strip of the ulcer and adjacent sound skin for histological study; this was pinned on a cork and placed in bichromate of potassium solution. In cutting away this little flap he demonstrated that there was no appreciable lesion of the subcutaneous connective tissue; the derma seemed hypertrophied, but the whole piece was easily dissected away with the scalpel. He reduced the bromide to gr. xv. night and morning, and gave five drops of Fowler's solution after each meal.

Sections of the piece of tissue removed from the ulcer showed great increase in the thickness of the

rete Malpighii, with hypertrophy of the whole skin in places. In several places villosities visible to the naked eye occurred, made up of all the elements of the skin thrown up and out into a minute mushroom-like or polypoid mass. In other places proliferation of young cells had taken place in the cutis, with atrophy and rupture of the epidermal layer, and partial escape of the newly formed tissue, constituting a sort of abscess, opening externally. In other localities the patches of inflammation were wholly circumscribed and subepithelial. The deeper layers of the skin, and to a certain extent the subjacent connective tissue, were infiltrated with young cells. The papillæ, hair-follicles, and sweat-glands did not appear to be the seat of any primary or important inflammatory change. In no part of the section was its surface (edge) covered by granulation tissue, as in a common ulcer. From these appearances he concluded that the ulcer resulted from a dermatitis, which was partly suppurative but largely hypertrophic.

Dr. Heitzmann said that the form of disease described by Dr. Seguin was very rare indeed. Dr. Ripley may have remembered a case seen in his office of a girl twelve years of age, who was taking large doses of bromide of potassium for epilepsy, and the result was visible upon the legs. It was not until he found single pustules of acne (with regular gradations toward the condition upon the legs) that he reached the conclusion that the condition was due to the effect of the bromide. In his case, as in Dr. Seguin's, the local treatment cured the eruption without ceasing the use of the bromide. It was a form of dermatitis in which it was perfectly surprising to see what degree of hypertrophy of certain portions of the skin might take place. It was really a papillomatous dermatitis, as the part most always affected was the derma, and it was sometimes raised to a degree rarely seen in warty growths. The epithelium of the mucosum was not materially changed. It was entirely of the nature of papillomatous dermatitis.

Dr. Ripley remarked that he remembered the case, and also remembered that the bromide was discontinued, and the child got better. But the bromide treatment was renewed because of a return of the epileptic seizures, and he would like to know whether the eruption upon the leg returned also.

Dr. Heitzmann replied that it did not; also that the bromides were not discontinued entirely; that the size of the doses was simply diminished, but as the child had another epileptic attack the dose which had heretofore been taken was again prescribed. The local treatment which he adopted was that which he ordinarily employed in the treatment of eczema, such as the use of diachylon ointment, tar ointment, etc.

Dr. Jacobi asked the President if the naked eye appearance of the ulcer in any way reminded him of some forms of lupus.

The President replied, not so much the appearance of lupus as that of epithelioma.

The Society then went into executive session.

Malt Extracts are stated by Dr. A. B. Prescott, (*Physician and Surgeon*) to contain about ten per cent. of albuminoids, which are mostly in a soluble form, twenty to forty per cent. of malt sugar, and about five to eleven per cent. of dextrine. The amount of diastase appears to be small in amount and feeble in effect.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, October 6, 1882.

Dr. E. C. Spitzka, President, in the Chair.

Dr. E. C. Spitzka presented a case of

INSANITY FOLLOWING SCARLET FEVER.

The patient was a girl aged about twelve, who had had an attack of scarlet fever at the beginning of the year. Symptoms of insanity, with attacks of mania and epilepsy, supervened. The child at present was partially demented.

LARYNGEAL EPILEPSY.

Dr. L. C. Gray read a paper on laryngeal epi epsy, the laryngeal vertigo of Charcot. After narrating a case of his own, Dr. Gray gave the histories in full of four cases of Professor Charcot's, one by Dr. Gasquet, and a very remarkable one of Dr. Sommerbrodt's. In all of these the essential symptoms were: a spasmodic cough, accompanied by a tickling or burning sensation at about the level of the larynx, then a sudden loss of consciousness, occasionally with slight convulsive movements. In Sommerbrodt's case the symptoms were seemingly due to a large intra-laryngeal growth, which was removed, when the patient recovered.

Dr. Gray contended that epilepsy was a more fitting name for this group of symptoms than vertigo. He suggested the possibility of epileptic, convulsive, or neurotic tendencies, either personal or hereditary, in patients manifesting these symptoms, but of the six cases only two were stated to be non-epileptic, while a third (Sommerbrodt's) had been subject to convulsions in early youth; even in these two non-epileptic ones the hereditary and the merely convulsive or neurotic tendencies do not seem to have been inquired into.

The fact that the attacks ceased promptly under treatment by counter-irritation to the skin over the larynx and the internal use of the bromides, the author of the paper did not regard as a valid argument against the epileptic basis of this disease; for in many of the cases the duration of treatment is not mentioned, and in Sommerbrodt's patient, who was unquestionably of convulsive tendency, there was no return of symptoms during nine months' observation. Dr. Gray then gave an account of the violent spasmodic cough occasionally seen in locomotor ataxia, as described by MM. Féréol and Jean, and also an autopsy made by the latter author, when atrophy of laryngeal muscles and of the pneumogastric and recurrent laryngeal nerves was found; he claimed that this went to show that organic alterations leading to violent cough did not necessitate unconsciousness. Dr. Gray then completed his paper by alluding to the researches of Dr. S. Weir Mitchell during the civil war, as showing how great a direct injury of a nerve was needed to produce unconsciousness. Of fifty-six cases of gunshot wound of the brachial plexus, ten fell unconscious, seventeen fell without losing consciousness, and twenty-nine walked away.

Echinococcus Disease in America.—Dr. Wm. Osler, of Montreal, read a paper upon this subject at the recent meeting of the Canadian Medical Association, and said that he had been able to find the histories of only nine cases in Canada and sixty-one in North America.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 14, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Oct. 7, 1882.	0	27	30	1	12	31	1	0
Oct. 14, 1882.	0	32	24	2	8	32	1	0

Medical Policlinic of the North-Eastern Dispensary.—We have received a circular announcing that the managers of the North-Eastern Dispensary have arranged to utilize the large mass of clinical material at this dispensary. Five clinics a week are to be held in one of the rooms of the main building. The clinics cover the subjects of Gynecology, by Dr. J. H. Gunning; Eye, Ear, and Throat Diseases by Dr. Simon Baruch; Skin Diseases by Dr. Wooster Beach; Nervous Diseases by Dr. Charles L. Dana; Heart and Lung Diseases by Dr. D. M. Camman. We are informed that the North-Eastern Policlinic does not aim to give a post-graduate course, but simply to furnish opportunities for personal study and diagnosis to limited classes. The terms begin October 27th. This attempt to make the material of our largest dispensaries available for study is a step in the right direction.

The Amount of Sulphur in organic combination in the urine is found by E. J. Stimson, Ph. C., to average .0031 gramme to 200 c.c. of urine. In a case of cancer of the liver this proportion was increased sixty fold, being .195 gramme to 200 c.c. of urine.

The New York Policlinic is another post-graduate school which will be opened in this city the present fall. It has been organized with the special view of teaching only clinical medicine and surgery. Didactic lectures will form no part of the plan of instruction at this institution.

A portion of the college building, situated in Thirty-fourth Street, is occupied by the Free Dispensary, under the management of the faculty, for the gratuitous treatment of the poor, and, in addition to the large number of patients treated, the matriculants of the Polyclinic receive bedside and operating-room instruction in the various hospitals and eleemosynary institutions of this city, with one or more of which every member of the faculty is connected.

There will be five sessions of six weeks each, commencing on Tuesday, November 7th. Thirty-six clinical lessons will be given on each subject during each session.

The Clinic will be open from 11 to 12 A.M., and from 1 to 5 P.M. daily (Sundays excepted), and both lecture-rooms of the college will be occupied at the same hour by different sections of the class.

The faculty is as follows: James R. Leaming, M.D., President of the Faculty, Professor of Diseases of the Chest; John H. Ripley, M.D., Visiting Surgeon to Charity Hospital and Visiting Physician to St. Francis Hospital, Professor of the Diseases of Children; E. Darwin Hudson, M.D., Professor of General Medicine; Louis Elsberg, M.D., Professor of Laryngology at Dartmouth College, Visiting Physician to Charity Hospital, Professor of Laryngology; Langdon C. Gray, M.D., Lecturer on Diseases of the Nervous System at Long Island College Hospital, Professor of Diseases of the Mind and Nervous System and Electro-Therapy; Richard C. Brandeis, M.D., Assistant-Surgeon to the New York Ophthalmic and Aural Institute, Professor of Laryngology and Otology; Andrew R. Robinson, M.D., Visiting Dermatologist to the Demilt Dispensary, Professor of Normal Histology in the Women's Medical College, Professor of Dermatology; Edward B. Bronson, M.D., Dermatology; George B. Fowler, Adjunct, Dermatology; John A. Wyeth, M.D., Surgeon to Mount Sinai Hospital, A. P. Gerster, M.D., Surgeon to Mount Sinai and German Hospitals, Professors of General and Genito-Urinary Surgery; Paul F. Mundé, M.D., Gynecologist to Mount Sinai Hospital (Outdoor Department), Visiting Physician to the Maternity Hospital, Professor of Gynecology and Obstetrics; W. Gill Wylie, M.D., Visiting Gynecologist to Bellevue Hospital, Surgeon to St. Elizabeth Hospital, Professor of Gynecology and Obstetrics; Emil Gruening, M.D., Visiting Ophthalmologist to Mount Sinai Hospital, to the German Hospital, Surgeon to the New York Eye and Ear Infirmary, Professor of Ophthalmology; David Webster, M.D., Assistant Surgeon to the Manhattan Eye and Ear Hospital, Professor of Ophthalmology; V. P. Gibney, M.D., Assistant-Surgeon to the Hospital for the Ruptured and Crippled, Professor of Orthopedic Surgery; Charles F. Stillman, M.D., Adjunct Professor of Orthopedic Surgery.

That Young Architect to whom our esteemed colleague, Dr. J. S. Billings, has been writing sanitary letters for so long, recently died at the ripe age of ninety-three. He reports the sanitary arrangements of his present quarters not up with the science of the day.

The Yellow Fever Epidemic.—During the week ending October 14th, 24 cases of yellow fever and 3 deaths were reported from Brownsville to the Surgeon-General of the Marine Hospital Service, making a total during the epidemic of 1,936 cases and 112 deaths. The disease is diminishing in the ranches. There are no cases outside the cordon. Since the 14th very few cases have occurred, and the epidemic is practically at an end.

At Pensacola, during the week ending October 11th, there were 420 cases and 27 deaths. Since that date the daily number of new cases has continued to be between 60 and 70, with from 2 to 4 deaths.

The mortality has been very light among the colored population. Three of the physicians have been taken sick, but are at present writing all doing well.

Some sensation has been occasioned by the appearance here of an Italian professor or doctor, who claims to be able to cure yellow fever effectually in the course of a few hours, without restricting the patient in drink, diet, or locomotion. In consequence, as is supposed, of a repetition of the same old scandal that generally occurs in epidemics, Major Walthall, Superintendent of Nurses for the Board of Health, has issued an order positively prohibiting nurses from accepting presents from patients under their care.

Nitrite of Amyl is said to stimulate the menstrual flow.

Original Communications.

CONSIDERATIONS ON THE ORIGIN AND NATURAL HISTORY OF TUBERCULOSIS.

By THOMAS E. SATTERTHWAITE, M.D.,

PROFESSOR OF HISTOLOGICAL AND PATHOLOGICAL ANATOMY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL; PATHOLOGIST TO THE ST. LUKE'S AND PRESBYTERIAN HOSPITALS, ETC.

THE study of tubercle, as we understand the term in its broadest significance and under its most varying manifestations, has always attracted profound interest among practitioners of medicine; and chiefly because of the close relations it holds to pulmonary consumption. But it is proper to say, that the present century enjoys the credit of having made the most notable advances in its study, the names of Bayle,[1] Baillie,[2] Laennec,[3] Louis,[4] and Rokitansky[5] being associated with a number of established facts that belong to the history of the disease; while on the other hand, a more numerous body, representing the work of the last fifteen years, appears even to have surpassed the men of the earlier half of the century, if we found our comparison upon the thoroughness, exactitude, and practical utility of their studies.

Nor is this astonishing when we remember that the older work was based almost exclusively on morbid anatomy, while the modern has utilized not only pathological histology, but its necessary ally, experimental pathology.

If, therefore, in the first place, we compare the present sphere claimed for tubercle in the animal economy with that given by Rokitansky,[6] in his manual, we find that the joints (Koester[7]), iris (Gradenigo[8]), skin (Lang,[9]), bones (under certain conditions, Friedländer[10]), the blood (Baumgarten[11]), and even the female breast (Le Dentu[12]) and synovial sheaths (Terrier[13]) are parts of the system that may at times be invaded, some even asserting that any tissue or organ can be the seat of the disease.

Whether or not we are prepared to accept these dicta, or any considerable part of them, it must be confessed that we have at our disposal a vast mass of accumulated facts that are calculated to greatly simplify our conception of the disease. Let us now examine them, with the view of determining the vital questions that are at issue, and which centre about (1) the histology of phthisis; (2) its unitarian, dual, or plural nature; (3) its so-called infective qualities; (4) the mode in which it originates; and (5) the intimate nature of the presumed infecting agent.

It is my purpose, in the limited time at my disposal, to give a review, necessarily hasty, of the experiments and observations of these later years, so as to deduce from them such conclusions as they seem to justly warrant.

The word *tubercle* is here defined to mean miliary tubercle, the pearly or gray granulation of Bayle,[1] or of Laennec,[2] which, by the way, appears to have been first described by Mangetus, who, in 1700, edited Bonet's[3] Sepulchretum.

And since the conclusions that are held by many to-day carry us back toward the doctrines of the great French school, it will be necessary to recall to our minds the tenets of Laennec and Louis. Before doing so, however, it is well to premise by stating that Bayle described tubercular phthisis in 1809, clearly distinguishing it in his descriptions from other forms of phthisis that he called *melanotic, ulcerous, calculous, cancerous,* and *granular.*

Laennec, however, was the first to give a clear delineation of the morbid appearances. In 1819, he stated that tuberculous matter occurred either under the form of *insulated bodies,* or of an *infiltrated substance.* Of the former the chief varieties were the *miliary,* the *crude,* the *granular,* and the *encysted,* while the infiltrated substance was *irregular, gray,* or *yellow.* For him tuberculosis (pulmonary) was not inflammatory, and pneumonia was not transformed into phthisis. These views of Laennec were subsequently sustained by Louis, who, after having examined the records in M. Chomel's service at the Charité, where sixty-seven phthisical patients died during a period of three years, was enabled to say: "Nos observations confirment celles de M. Laennec, et que, pour nous comme pour lui, l'existence des tubercules dans les poumons est la cause et constitue le caractère propre de la phthisie." It is interesting for us now, after analyzing all the vast amount of work that has been done on this topic during the succeeding years, and before the microscope had become a power in medical pathology, to weigh well these remarkable words. Afterward Lebert,[4] who brought the microscope to bear upon the matter, further corroborated the teachings of Laennec and Louis, asserting confidently that both forms of tubercle already mentioned were of the same nature, containing the peculiar bodies that he called "tubercle corpuscles." Somewhat earlier, however, Rokitansky had given in his adhesion to this view, but called attention to the multi-nucleated corpuscles (mutterzellen), which he had observed in the tubercle granulum.

But these statements were not to remain long unchallenged, and Rheinhardt[5] had little difficulty in demonstrating that the so-called infiltrated tubercle had properties which would naturally belong to an inflammatory deposit undergoing cheesy transformation. It was now the merit of Virchow to step in, and accepting Rheinhardt's discovery, to ask for the repudiation of any so-called tubercle that was not of the miliary variety. This move in the direction of simplicity was the more acceptable when he demonstrated conclusively that the *yellow, infiltrated,* or *crude* tubercle (for it possessed these names in common) might originate from inspissated pus or encysted parasites.

These rigid requirements, however, seemed to raise an insuperable barrier before the adherents of the unitarian theory, for it was often impossible to

---

[1] G. L. Bayle: Recherches sur la Phthisie Pulmonaire. Paris, 1810.
[2] Matthew Baillie: The Morbid Anatomy, etc. Third American edition. Philadelphia, 1820.
[3] R. T. H. Laennec: A Treatise on the Diseases of the Chest, p. 278 et seq. Translated by John Forbes, M.D. New York, 1860.
[4] P. C. A. Louis: Recherches Anatomiques Pathologiques et Therapeutiques sur la Phthisie. Paris, 1825.
[5] Rokitansky: Lehrbuch der Path. Anat. Wien., p. 289. 1855.
[6] Rokitansky, loc. cit.
[7] Koester: Arch. f. Path. Anat., xlviii., p. 95. 1869.
[8] Gradenigo: Ann. d'Oculistique, 1870. Br. Med. Jour., March 4, 1882.
[9] Lang: Vierteljahrschr. f. Derm. u. Syph., B. 1, N. F., p. 368. 1874.
[10] Friedländer: Arch. f. Path. Anat., ix. Schneppel: Arch. f. Heilkunde, vol. xiii., p. 69. 1872.
[11] Baumgarten: Centralbl. f. d. Med. Wiss., No. 15. 1881.
[12] Le Dentu: Rev. de Chir., 1881.
[13] Terrier and Verchère: Rev. de Chir., July, 1882.

[1] G. L. Bayle, loc. cit., p. 18.
[2] R. T. H. Laennec, loc. cit.
[3] Bonet: Sepulchretum Sive Anatomia Practica, lib. ii., De Resp. Lacsa, Obs. 19. 1679.
[4] Lebert: Traité Pratique des Maladies Scrofuleuses, etc. Paris, 1849.
[5] Rheinhardt: Cellular Pathology, p. 159. 1860.

trace any genetical relation between the miliary disease and certain forms of phthisis.

It was natural enough, therefore, that some other cause should be sought for, and accordingly an opportunity was afforded for the doctrines of Niemeyer,[1] who endeavored to connect phthisis with pneumonia, of which he claimed it might be a natural sequel.

But Buhl,[2] of Munich, soon succeeded in turning the tide of opinion back to the direction in which it had formerly flowed under the influence of the French school, for he succeeded in showing that bodies resembling tubercles in their gross and microscopic appearance might be produced in animals by the presence in the body of certain centres of infection—cheesy foci. These views had been hinted at by Virchow, but loudly proclaimed by Villemin,[3] some years before, on the strength of elaborate and thoughtful experiments.

Villemin, who was a Professeur Agrégé at the École Imperiale of Val de Grace, had inoculated animals with the caseous matter of human phthisis, and found not only that his subjects soon gave evidence of infection, but upon being examined after death exhibited well-marked tuberculosis of internal organs. He accordingly adopted the view that phthisis is a specific disease and contagious, or, which is practically the same thing, communicable by inoculation.

Villemin's doctrines were neither favorably received by the French Academy, to a committee of which they were referred, nor by the pathologists of England and Germany, who repeated his experiments. For Wilson Fox[4] and Burdon Sanderson[5] argued that though the lesions were in reality produced they were not due to a specific virus, but rather to a *mechanical irritant*. Fraenkel and Cohnheim,[6] from their earlier observations, further sustained this view. The experiments of Waldenburg[7] also now assumed a proper prominence, for he showed that inoculation of alcoholic specimens and boiled tissues, which are inert as poisons, and aniline dyes, will also set up a tuberculosis. This experimental disease, therefore, received, and justly, the name *artificial tuberculosis*. But it was not without a struggle, for as each successive observer studied this artificial disease and compared it with the miliary lesions of tuberculosis, so it came to be discovered that the histological constitution of the tubercle is not a perfectly simple matter. The adenoid tissue, compared by Virchow to that which forms an important element in the structure of the lymphatic glands, was not always present, nor was the giant cell, first described and delineated by Rokitansky.[8] In fact the epithelioid corpuscles of Schneppel, which Rindfleisch thought so characteristic, were not always present, nor was there the central caseation which is now so much spoken of, though one or the other would usually be present; and yet the miliary body might also have developed into a fibrous nodule or simply a mass of plastic material containing the lymph-corpuscular elements. It was no wonder, then, that observers were in doubt as to the genuineness of either the real or the artificial disease, as the result of microscopic investigation, and it was not singular that Schottelius[1] should insist that phthisical granulations may be mistaken for minute capillary pneumonias or for occluded bronchioles. For it was thought necessary to believe that the tubercular deposit must occur at a special point in the lung, whereas we now know[2] that the infiltrations may originate in the wall of a pulmonary vessel, of a bronchiole or larger bronchial branch (Charcot), or an infundibulum, or alveolus, the intramural deposit itself, or the exudation from the contiguous surface, extending into the vessel, air-tube, alveolus, or infundibulum. Thus the histological structure has been found to be complex, and its site variable. Fortunately the gross appearances are such that no serious doubt could well be entertained of their true nature, for the early appearance of the bright, translucent granulations, often formed of aggregated spheroidal bodies, each at a later stage prone to undergo central caseation, establish conditions that are not apt to be confounded with any other deposits.

In returning to the question of the specific nature of the infection, we may now say that the conclusions of Waldenburg were offset by those of Gerlach,[3] Professor in the Veterinary College of Berlin, who claimed as the result of elaborate experimentation, that non-tuberculous matter will not produce tuberculosis. With this direct opposition of results among scientific men, it was thought best to adopt new methods, and accordingly Orth,[4] a pupil of Virchow, tried the experiment of feeding animals with tuberculous matter. He selected a number of rabbits that appeared to be healthy, and fed them with tuberculous matter from cows and human beings. The rabbits fed with the former became infected by generalized tuberculosis, but with the latter the results were negative. The microscopic characters of the lesions were the same as those found in the human species. Professor Schneppel[5] now came to the side of Villemin and Gerlach, and opposed Fox and Burdon Sanderson, for he showed that the forced inhalation of such substances as coal, cinnabar, dried pus, fecal matters, and mould fungi has no unfavorable influence upon the tissues of the air-passages. On the other hand, decomposing substances will, under similar conditions, cause processes that we should now regard as tubercular.

Tappeiner,[6] of Meran, continuing the same line of experimentation under Professor Von Buhl, subjected dogs to an atmosphere laden with phthisical sputum in a state of minute division. He compelled them to inhale it from twenty-five to fifty-one days. They were subsequently found to have developed miliary tuberculosis in every instance.

Schottelius[7] then varied the experiment by forcing dogs to inspire an atmosphere laden with various organic substances, such as bronchitic sputum, Limburger cheese, and powdered brain, in a state of fine division, and his results were the same as at first. These views were further sustained by Wargunin,[8] acting under Professor Rajewski, who subjected sixteen dogs to an atmosphere laden with

[1] Niemeyer: Lehrbuch der Spec. Path. u. Ther., 7te Aufl. i., p. 250. Berlin.
[2] L. v. Buhl: Inflammation of the Lungs, etc. Translated by Drs. Mann and St. John. New York, 1874.
[3] J. A. Villemin: Gaz. Med. de Paris, 1865, No. 50, p. 787, Études sur la Tuberculose, etc. Paris, 1868.
[4] Wilson Fox: Brit. Med. Journ., May 23 to June 6, 1868.
[5] Burdon Sanderson: Med. Times and Gaz., 1868, p. 481.
[6] Cohnheim and Fraenkel: Virchow's Arch., 45, p. 216.
[7] Waldenburg: Berl. Klin. Woch., 51 and 52, 1867.
[8] Rokitansky, loc. cit. Langhans (Virchow's Archiv., 42, p. 382 1868) described them subsequently with some minuteness.

[1] Schottelius: Virchow's Archiv., 73, p. 574, 1878.
[2] Cornil and Ranvier: Man. d'Histologies Pathologique, t. 2, p. 144.
[3] Gerlach: Virchow's Archiv., 51, p. 290, 1870.
[4] Orth: Volkmann's Sammlung, 64, 1873.
[5] Schneppel: Virchow's Archiv., 56, p. 38, 1872.
[6] Tappeiner: Virchow's Archiv., 74, p. 397, 1879.
[7] Schottelius: Med. Centralbl., 3, 1878.
[8] Wargunin: Vratsch, No. 6, All. Med. Centralbl., April 8, 1882.

emphysematous sputa, meal, disinfected tuberculous sputa, and Schweitzer käse. The experiments were all positive, in so far as tubercles occurred in every case, the grade of the disease depending on the age of the process.

Some later experiments of Tappeiner[1] have taken away from the force of his early ones, in so far as that he could not infect dogs fed with tubercular matter from the human being, but Weichselbaum's[2] experiences of the present year sustain the theory of specificness. He performed eleven experiments on dogs, forcing them to inhale an atmosphere laden with tuberculous sputum, and infection followed uniformly, even after a single inhalation. When Limburger cheese was used, the experiments were negative in two cases, and positive in one. Of two dogs into whose bodies was injected a solution of tuberculous sputum, miliary intoxication ensued in both. Two dogs were then subjected to the same treatment, except that Limburger cheese was used, and the result was negative in both. He therefore felt justified in claiming that tuberculous matter, when inhaled or injected, uniformly produces tuberculosis, while, on the other hand, other substances either do not or only on particular occasions. The later experiments of Baumgarten gave further support to this view. Taking a few drops of blood from a tubercular animal, he succeeded in so inoculating the anterior chamber of the eye that a crop of miliary tubercles developed in the course of a few weeks. On the other hand, blood from a healthy animal produced no pathological effect. Even septicæmic blood had no other result than a chronic inflammation. This we see is directly opposed to the conclusions furnished by a case in the practice of Dr. J. R. Wolfe,[3] where a blow upon the eye was followed by a little nodule in the upper segment of the iris. After removal of the deposit the wound did not heal kindly, and finally the eye was enucleated. On microscopic examination, the iris and ciliary body were found studded with tubercles, showing in their centres giant cells. In this instance, the tubercles followed a blow, and the child was subsequently found to be cachectic, while indolent, ichorous ulcers developed on both legs. The teachings of this incident would seem to be, that the traumatism developed the tubercles, which subsequently became generalized; or, possibly, that the condition of the patient determined the inflammation to be tubercular. In either case, the traumatism seems naturally to have been the exciting cause.

Thus far, then, we have found one class of observers who claim from experiments on the lower animals that the inoculation of phthisical matter produces a specific disease—Villemin, Gerlach, Tappeiner, Weichselbaum, and Baumgarten; while it is even reported that some Greek physicians have injected tuberculous matter from a cow into the circulation of a living man doomed to death by gangrene of a limb. At the post-mortem examination numerous small and recent tubercles, without abscesses, were found.[4] On the other hand, Fox and Burdon Sanderson, Andrew Clark,[5] and Schottelius, Schneppel, and Wargunin oppose this view, while Cohnheim[1] first joined the opposition, and now appears to believe in a specific virus. The truth remains, that observers of the most respectable reputations have recorded results from the same series of experiments that are diametrically opposed to one another. Nor do clinical facts aid us materially. Thus while the contagionists refer to the often-asserted communication of phthisis to one another by cattle through *cohabitation*, by which is meant close association, as in adjacent stalls, the fact is assured, as I shall presently show, that the tuberculosis of animals is in several ways distinct from that of the human kind, and again the evidence of those who have had large experience in consumptive hospitals is by no means favorable to the contagion theory. Davies[2] and others I might cite show that there seems to be no tendency among the medical attendants or others employed in the care of the sick to contract the disease.

We therefore seem to be justified in claiming with Virchow, little more than two years ago,[3] that neither "experiments nor clinical observations, up to the present moment, have furnished any decisive facts. We should, therefore, consider the subject in a state of abeyance; for if one is desirous at present of arriving at a conclusion by comparing the positive and negative results that have been reached, especially in forgetting that the proportion of animals used for investigative purposes which became spontaneously tuberculous is considerable, he must go beyond the facts in the case. It is possible to think that hazard plays an important rôle in the results. For one, at least, who cannot recognize the similarity of the tubercles of the bovine race and the caseous products, the results obtained, so incongruous and contradictory, do not appear to me to have been yet scientifically demonstrated. Therefore, in the light in which I consider it, experimental investigation should be devoted to ascertaining if, by any alimentation, consisting of different, altered, and unwholesome substances, a formation of similar products will not occur in the organism of our domestic animals. Moreover, it is only by including in our researches a very large series of subjects, and not isolated cases, as some physicians have done lately, that we will succeed in learning in what proportions pre-existing or coincident affections force the result of the conclusions."

In the presence, then, of this opposing array of statement and counter-statement, how difficult it is to believe that we are in the presence of an infective disease, armed with a specific virus.

For even the apparently conclusive experiments of Cohnheim and Baumgarten are met and negatived by the no less striking one of Wolfe, in which he clearly shows that a simple traumatism of the eye in an apparently healthy child occasioned miliary tuberculosis that led slowly but steadily to systemic infection.

Before closing this part of our subject, it will be worth our while to advert for a moment to the experiments of Professor Siedamgotsky,[4] employed by the Chancellor of the King of Saxony to inquire "whether and how far the use of the meat and milk of cows which have the pearl disease (bovine tuberculosis) is harmful to human beings." He experimented on nineteen lambs and pigs, the latter being presumed not to have proneness for tubercle.

[1] Tappeiner: Deutsch. Arch. f. Klin. Med., No. 29; All. Med. Central-Ztg.
[2] Weichselbaum: Centralbl., No. 19, 1882.
[3] Wolfe: Brit. Med. Journ., March 4, 1882.
[4] New York MEDICAL RECORD, Sept. 9, 1882.
[5] Sir Andrew Clark has found that any kind of pus injected into rabbits will produce tubercle. Address at Bellevue Hospital Medical College, Dec. 14, 1878. MEDICAL RECORD.

[1] See Med. News, Feb. 4, 1882.
[2] Brit. Med. Journ.; Phil. Med. and Surg. Reporter., Sept. 30, 1882.
[3] March 10 1880.
[4] Siedamgotsky: Arch. f. Wiss und pract. Thier-hlke., Ma 8, 1882.

Twelve lambs and pigs were fed on tuberculous milk or meat, and eleven were found, on post-mortem examination, to be tuberculous. The positive results of this experiment are met by the fact that of five lambs and pigs which were subjected to the same conditions, except that they were not fed with tuberculous matter, four were found, on post-mortem examination, to be tuberculous; so that he was justified in concluding that his experiments yielded no result giving any positive support to the statement that tuberculosis can be conveyed to mankind through the milk or meat of tuberculous (pearly) cattle.

The evidence of Law on an allied point is also important. According to him ("National Board of Health Bulletin," 40, 1882), we have no satisfactory evidence that tuberculosis has ever been conveyed by bovine lymph. How then explain that animals, especially pigs, should acquire tubercle, as Siedamgotsky's did, when not naturally prone to it? May not the answer be, as suggested by Virchow, that *under confinement* certain foods or drinks will permit of the disease being engendered?

This supposition brings us back to the tuberculosis of horned cattle, and the phthisis of animals in menageries and zoölogical gardens, which, according to many old observers, is to be credited to their captivity. According to Cruzel, quoted by Fleming,[1] of one hundred old and fat oxen, fully half were tuberculous, while cows were rarely affected. Prof. Lafosse, of the Toulouse Veterinary School, found that cattle employed in agriculture, or cows that were used for breeding purposes, escaped the disease; while, on the other hand, long-continued lactation promoted it. Still, remarkable instances are given by veterinary surgeons, where cattle apparently healthy have become tuberculous by cohabiting, *i.e.*, occupying the same or adjacent stalls.

And now it is well to observe at this point that the so-called bovine tuberculosis is, in reality, different from the human, at least in its morphological character and mode of development. We therefore should recognize, with Virchow, that this difference may impair the strength of arguments based upon the use of it in inoculation experiments. The points of difference are as follows: In man tubercle tends to become caseous; in cattle cretaceous. The cretaceous change is comparatively rare in the human being, and follows the caseous. The caseous change is a rarity in the bovine race. Ulcers and cavities (vomicæ) are characteristic of the advanced stages of human phthisis, which we have here assumed to mean tuberculosis. They occur rarely, if at all, in the animal variety.

The little centres of disease in the bovine race grow by the deposit of cretaceous matter in concentric layers until the pulmonary lobule is distended to many times its normal size, so that at length in some cases it bursts through its boundaries and unites with a similarly extending deposit in an adjacent lobule, the two forming a yellow tumor of stony hardness. Meanwhile the interlobular tissue is filled with little tumors, usually pedunculated, that vary much in size, each developing a yellow centre. (See Fig. 1.) The visceral and parietal layers of the pleura are also covered with similar tumors, which are then known by the name of "grapes," "angleberries," etc. (See Fig. 2.) Now the affected glands develop in a similar way in cattle by "concretive accretion," while in the human kind they first atrophy before the deposit of lime-salts takes place. Virchow,[1] accordingly, has been inclined to regard the latter changes as similar to those that attend the development of tumors, and prefers to consider them in the category of the lympho-sarcomata. At this point it is but proper to advert for a moment to the remarkable views of Dr. Charles Creighton,[2] of

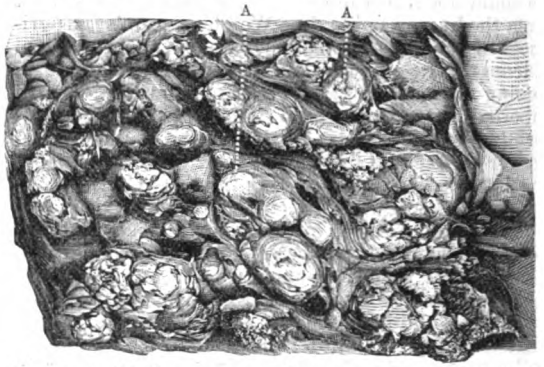


FIG. 1.—In this figure are seen the cretaceous nodules, A, A, of bovine tuberculosis. From the photograph of a specimen in the possession of the author of the paper.

Cambridge, England. This observer, in conducting post-mortem examinations on phthisical human subjects, was led to think that a certain class could be separated from the ordinary varieties, and these presented certain peculiarities similar to those described in the pearl disease (bovine tuberculosis, *Merlinsigkeit, Duckweed, Potato Disease*). In the twelve cases which serve to form the basis of his views, he lays stress upon certain (1) leaf-like or cord-like outgrowths of the pleura and peritoneum; (2) distinctly nodular formations in the lymphatic glands; and (3) the smooth-walled vomicæ or en-

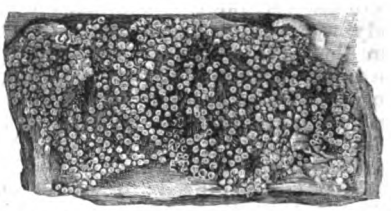


FIG. 2.—In this figure are seen the "angleberries" or "grapes" of the bovine race, this specimen having been taken from the parietal pleura of a tuberculous (pearly) cow. Each berry is usually pedunculated, and each has a cretaceous centre.

capsuled nodules. Apropos of these points, it may be said here (1) that the writer's experience in two cases of bovine tuberculosis do not lead him to believe that the "leaf like or cord-like outgrowths" are distinctive of the bovine disease, and that there is a danger of mistaking cross-sections of terminal bronchial twigs for smooth-walled vomicæ; a criticism which has already been made by one who has authority.

It is also well to observe here that it is not only in the lungs that these curious tumors are found, but also in other parts of the body, as in the peritoneum, membranes of the brain. When, therefore, Toussaint,[3] in a very recent article, claimed that tuberculosis of men and cattle is the same, he laid himself open to serious criticism, and when he, on

[1] G. Fleming, Vet. Journal, XI., 1-5, 1880.

[1] Virchow: The Monthly Rec. of Med. and Pharm., February, 1882.
[2] Creighton: Bovine Tuberculosis in Man, London, 1881.
[3] Toussaint: The Veterinary Journal, June, 1882.

another occasion, detailed the results of his experiments on hogs, rabbits, and cats, it was easy to see in the first place, from the experiments of Siedamgotsky, that hogs may be improper subjects for experimentation, while we are also now aware that rabbits are wholly unsuited for the purpose, since both they and guinea-pigs are prone to tuberculosis under the ordinary conditions in which we find them.

But turning aside from this form of animal experimentation, let us glance at another method. For some years past a certain class of German and French observers has been devoting attention to the question of bacteria and their relation to various infective diseases. Tubercle has, according to various of them, been claimed to have a peculiar pathognomonic parasite, but since this claim has been so frequently made, and often upon slender grounds, pathologists have not turned very willing ears in this direction.

Quite recently, however, Dr. Robert Koch, now of Berlin, advanced a theory in support of the doctrine of a specific parasite in tubercle, and his writings and demonstrations have revived the matter and secured for him an unusually attentive hearing.

I do not propose here to give an extended description of the methods employed by Dr. Koch, suffice it to say that he finds a peculiar microphyte in every form of tuberculosis. This parasite has a length equal to half the width of a red blood-corpuscle, is staff-shaped, and has a slightly notched extremity. By a special method of his own he cultivates it in the blood serum from the ox, and having isolated it, as he claims, inoculates successive cultivations upon different animals. It is not my intention here to criticise his methods, but merely to say in passing that experiments on rabbits and guinea-pigs, which he practised extensively, are open to objections on grounds that have already been given. But so far as my personal experiments are concerned, and they have not been numerous, I have not been able to discover these bacteria by Koch's method, although I have seen the pulmonary alveoli of phthisis crowded with ordinary bacteria. I have been successful, however, in obtaining certain peculiar bacteria in phthisical sputum. Dr. Devlin, of the St. Luke's Hospital resident staff, having recently obtained for me some phthisical sputum, I subjected it to the method of Dr. Gibbes,[1] curator of King's College Museum, London.

The following are the formulæ recommended:

Take two grammes of magenta crystals, three grammes of pure anilin, twenty cubic centigrammes of alcohol, specific gravity 830, and twenty cubic centigrammes of water. Dissolve the anilin in the spirit and then rub up the color with it in a glass mortar, adding the spirit gradually until it is all dissolved, then add the water slowly while stirring, and keep in a stoppered bottle. Make a saturated solution of chrysoidin in distilled water, and add a crystal of thymol to make it keep. A dilute solution of nitric acid (com.), one part of acid and two of distilled water is then made.

Spread a thin layer on a cover-glass and let it dry; when quite dry pass it two or three times through the flame of a small Bunsen burner and let it cool. Filter two or three drops of magenta solution in a watch-glass, place the cover-glass with the sputum downward in the stain, taking care that there are no air-bubbles under it. Let it remain for fifteen or twenty minutes, then wash in the dilute acid until all color has disappeared. Remove the acid with distilled water, when a faint color will return; then place the cover-glass in the same manner as before in a few drops of chrysoidin filtered into the bottom of a watch-glass, and let it remain a few minutes until it has taken on the brown stain; wash off the superfluous color in distilled water and place the cover-glass in absolute alcohol for a few minutes; remove and dry perfectly in the air and then mount." Prepared in this way certain bacteria may be seen which, according to measurements made by myself, in conjunction with Mr. Grunow, the microscope maker, had a diameter of about $\frac{1}{21600}$ inch. They were rod-shaped, somewhat constricted at the centre, like the cakes known as lady-fingers, and had a length equal to three or four times their breadth. They stained a deep blue, and were to be distinguished from other rod bacteria in chains that did not color, and still others which appeared in groups, the so-called micrococcal colonies. The breadth of these latter was about $\frac{1}{31000}$ inch. These bodies were not as uniform in appearance and arrangement as the ordinary bacteria of the mouth that may be seen when covering an epithelial scale, but while grouped together were at somewhat varying distances apart. Though taking the color, as described by Koch, they do not precisely correspond to his description, and it is just here where there is an insufficient amount of agreement, even among those who believe with Koch that we are in the presence of the specific parasite. The inoculation experiments of Koch, however, though requiring time, are not remarkably difficult, and we may hope that within a short time sufficient light will be thrown upon the subject to enable us to estimate their proper relations to phthisis.

Should these peculiar views eventually prevail they would set at rest forever the question as to the dualistic or pluralistic character of phthisis. It is noteworthy, however, that there is a strong tendency toward the unitarian theory of consumption, not so much the result of histological study as from the standpoint of experimental pathology and morbid anatomy. For continued research has shown that while we cannot regard either adenoid tissue, the giant-cells, epithelial corpuscles (Schneppel's), or round-celled infiltrations as pathognomonic, we have turned rather toward a point in the gross appearances, viz., *central caseation*, which in most cases develops in due time. But the revelations of the microscope have not been without their good result, since they have shown that all these elements are merely the ordinary products of inflammation, which, however, instead of progressing toward organization tends toward destructive metamorphosis. And the close relation of tuberculosis with inflammation is further shown by the fact that the miliary deposits accompany or are a sequel to inflammatory processes. Indeed, *artificial tuberculosis* is uniformly produced by agents that set up inflammation.

How, then, may we explain the different aspects under which we recognize phthisis? In a simple manner. The miliary tubercles form at first either in the nooks and angles where the bronchiole meets the alveolar passages (Rindfleisch[1]) or in the walls of a vessel (Cornil and Ranvier[2]), infundibulum, or even in one of the larger divisions of the bronchus. These nodules, growing, eventually occlude the alveolar passage, vessel, or bronchiole, as the case

[1] The Lancet, Aug. 5, 1882.

[1] Rindfleisch: Ziemssen's Cyclopæd., Am. ed., v., p. 642.
[2] Cornil and Ranvier, loc. cit.

may be, and uniting to form a globular mass set up an inflammation in the surrounding tissue. It may be a pneumonia; it may be a bronchitis. The former is the *desquamative pneumonia* of Buhl, or *infiltrated tubercle* of Laennec, or it may be that the tubercles do not undergo caseous change, but the fibrous, and that the adjacent inflammation partakes of the same nature. This form of tuberculosis, the fibrous, occurred in one-third the cases of Charcot; about one-fourth, or twenty-eight per cent., is my experience, while the cheesy change occurs in about one-half, fifty-two per cent., the calcareous in thirty-seven per cent. Miliary tubercles were found in my experience in about one-third the cases that I have recorded (thirty-two per cent.), but this is doubtless a low estimate, for attention was not always specially directed to this point. Orth[1] found tubercles in about one-half the cases of phthisis he saw.

Cavities are found as the result of the separation of large cheesy masses, which are formed by the caseation of the tubercles and the contiguous tissues.

Fibrous phthisis is that form of phthisis that is undergoing spontaneous cure, a result which nature has in view, and will often accomplish, if she meets

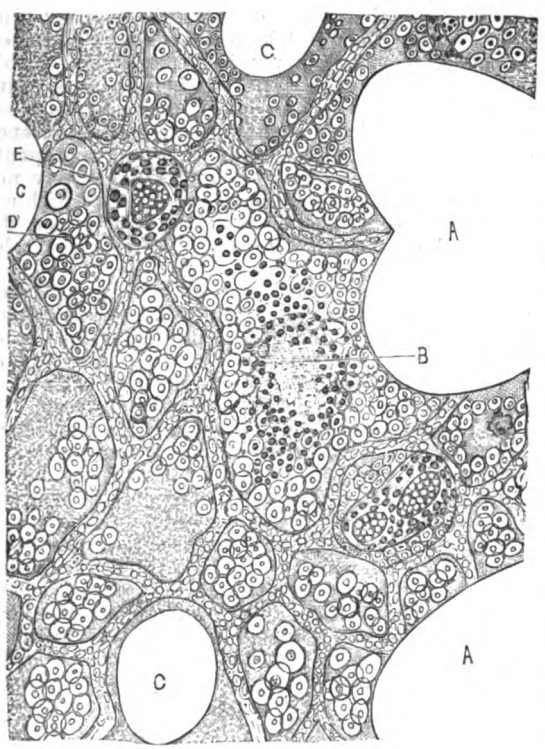


FIG. 3.

with assistance rather than obstruction to her peculiar methods. In this form of phthisis miliary bodies are hard to find, and yet Baumgarten[2] claims to have been successful in finding them by assiduous investigation. These unitarian views receive the support of Charcot,[3] Grancher,[4] Cornil and Ranvier[5] of the present French school, as well as Rindfleisch,[1] Ziegler,[2] and Koester[3] of the German school, Fox, Burdon Sanderson, Moxon, and Andrew Clark of the English, and carry us back to that remarkable phrase of Louis to which we have already alluded, and which was uttered more than sixty years ago: "L'existence des tubercules est la cause et constitue le caracter propre de la phthisie."

The illustrations of miliary tubercle employed in this article were taken from original specimens in the possession of the author, and exhibit the lesions as they were seen in the most typical examples of disease, viz., in the pulmonary tissue and serous membranes. In the one instance (Fig. 3) the miliary nodule is seen to be located in the wall of an infundibulum (A), while there is a change in and about a blood-vessel (E) that indicates it is the seat of commencing tuberculous change. The centre of the granulum (B) is cheesy, but whether or not this cheesy centre corresponds to a giant-cell is difficult to say. About this centre is a zone composed of degenerating corpuscles, of lymphoid and epitheloid type, while on the extreme outer boundary are the enlarged and spheroidal cells that approach very nearly in approach to the description given by Schneppel. C, C, C, are cross-sections of bronchioles, and D is an alveolus in the condition of catarrhal pneumonia.

In Figure 2, an example of human tubercle in the omentum, the miliary body (A), is seen in close connection with one of the fibrous trabecles, having possibly originated from a lymphatic or blood-vessel of the part. Curiously enough, at some distant points may be seen multi-nucleated corpuscles (B), as well as rounded lymph-corpuscles (E) and the proliferating endothelial elements (C) of the connective tissues. Now all of these elements are found in ordinary inflammatory deposits, so that, as already intimated, the whole process is suggestive of inflammation, and that it really is associated with an inflammation may be seen by inspection of the air-vesicles in Figure 3, where, as already said, the histological characters are those of catarrhal pneumonia.

In the so-called laryngeal phthisis we have, according to my investigations, less pronounced forms of tuberculosis, though the miliary bodies are also found, but it is not improbable that in some such organs there may be diffused inflammations, tending, it is true, to caseous change, which exhibit modifications of the typical miliary tubercle. And now we come to the hereditary question.

No one can doubt, notwithstanding all the discussions on the infective quality of the disease, that tuberculosis is hereditary, for this fact has been abundantly proved by statistics. How then can the contagionists explain a fact apparently so at variance with their theory? In the following way: Rindfleisch says that the virus requires for its soil a diathesis, which he calls the scrofulous. Koch also admits that the soil must be suitable, or, which is the same thing, that there must be a predisposing condition, though, singularly enough, he tells us that he can invariably inoculate dogs with tubercle, and yet dogs have no tendency to the disease.

The disease is thus admitted by the most ardent of contagionists to be connected primarily with a vicious constitution, which only blooms into the full vigor of tubercular maturity when it has been attacked by the infecting agent.

[1] Orth: Berl. Klin. Woch., No. 40, 1882.
[2] Baumgarten: Volkmann's Sammlung, 1882.
[3] Charcot: Arch. Gen. de Med., Oct., 1879.
[4] Graucher: L'Union Med., No. 30, 1880.
[5] Cornil and Ranvier: Manuel d'Hist., i., 2, 1882.

[1] Rindfleisch: Ziemssen's Cyclopæd., Am. ed., v., p. 642.
[2] Ziegler: Lehrb. d. allg. u. spec. Path. Anat., i., p. 156 et seq.
[3] Koester, loc. cit.

There are then two factors: a predisposing condition and an infecting agent, and tuberculosis may be called, as Baumgarten claims, a *latent disease.*

Looking, therefore, at the origin of the disease from this standpoint, scientific treatment should be addressed, in the main, to the primary condition.

For is it supposable that in the event of the disease being conclusively shown to depend for its origin on a peculiar parasite, we can escape it successfully, or safely endure such treatment as will render it harmless?

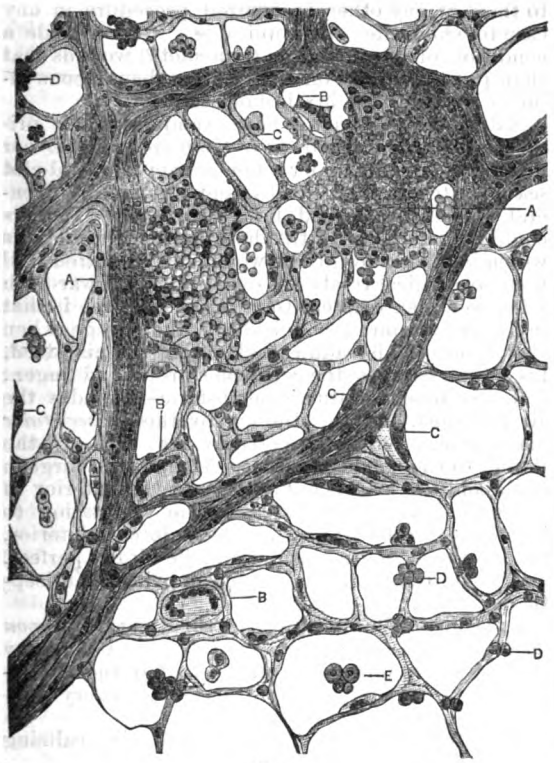


FIG. 4.

I now venture to propose the following conclusions, which I think may be fairly drawn from a study of this question:

1. Tuberculosis is a disease that deserves the name hereditary, for it attaches itself to certain families throughout many successive generations; and it is most apt to attack those members that are deficient in physical vigor, from whatever cause. Proper precautions often enable those that are thus liable to escape it or withstand it successfully.

2. The most distinguishing characteristic of tubercle is the occurrence, in the tissues, of minute, bright, glistening, translucent particles that have been called miliary tubercles, granula, granulations, etc.

3. They are the result of an inflammatory process, because they can be produced by the introduction of mechanical irritants into the system.

4. When these minute bodies coalesce to form larger bodies and undergo a change of color, they are known as crude or yellow tubercles.

5. Some of them contain the reticulated tissue that has been called adenoid, because it resembles the retiform tissue of lymphatic glands. As the miliary tubercle advances in age, one or more large multi-nuclear foci may be found, either at the centre or periphery of the nodule. Sometimes Schneppel's epithelioid corpuscles are found, sometimes lymphoid elements, and sometimes fibrous tissue, but no one of these tissue elements, which all belong to the connective-tissue series, is pathognomonic of tubercle.

6. The lungs and serous membranes are most frequently attacked, and it is here that the natural history of the tubercle is studied to the best advantage. In other regions of the body there may be modifications of the tubercle, so that its distinctive character is difficult to demonstrate.

7. In the gradual development of these bodies they undergo caseous change at the centre, which phenomenon is another marked feature of tubercle. Still, in some instances we have reason to suppose that the miliary tubercle may become organized, and thus a cure result.

8. Tubercles are rarely found without more or less contiguous inflammation that may be classed as a pneumonia or bronchitis. The latter is the *infiltrated tubercle* of Laennec, the *catarrhal pneumonia* of Niemeyer, or the *desquamative pneumonia* of Buhl. The pneumonia may, perhaps, be protective in some instances, serving to wall off a caseous process, thus preventing it from becoming disseminated, or it may eventually itself participate in the same process and lead the way to necrosis of the lung and the production of cavities.

9. Tubercles may be confined to a limited area and a single lobe of the lung, or a single lung, or they may be diffused pretty equally in different organs. Generalized, disseminated, or secondary tuberculosis is the most dangerous and malignant, and is probably due to transmission of the disease by the lymphatics or blood-vessels, usually the latter. In this secondary form the first manifestations are the gray granulations, as they are also in the primary form.

10. Tuberculosis is inoculable, producing its kind if it produces anything, but other substances will also, in a certain number of cases, produce the same apparent lesions; in fact, not only any organic substance that is capable of physical deterioration, but also a variety of non-organic substances.

11. There is some good evidence favoring the theory that consumption is contagious, *i.e.*, that it is capable of propagation by *cohabitation*, or, in other words, close association with persons that have the disease. The number of well-authenticated instances, in the human being, where the origin of the disease can be explained in this way, is sufficient to give considerable strength to the theory. The best evidence on this point is obtained from a study of phthisis in the domestic animals, especially in horned cattle.

12. And yet the morphological differences between their form of phthisis and those of the human being are such as to put us on our guard against forming hasty conclusions from a comparison between them.

13. Nor does it appear that we have good grounds for believing that the meat or milk of phthisical cattle, when taken as food, has ever produced a single instance of tuberculosis in the human being.

14. But we should, none the less, discountenance the sale of such meat or milk, since even if they are not infectious, they are deficient in proper nutritive elements, and for this reason alone should be debarred from sale.

15. And so in the case of bovine virus, though it does not appear that any person has been rendered tuberculous, yet no vaccine virus should be held to be suitable for vaccination purposes unless proper assurances have been given that the animals yielding the vaccine were in every respect free from tubercle, as determined by inspection after slaughtering.

16. Pulmonary tuberculosis and pulmonary phthisis are, in the majority of cases, interchangeable terms.

17. As a natural deduction from the above views attention should be directed chiefly, in prophylaxis and treatment, to the vicious constitution which is conceded to be an essential prerequisite of the disease, rather than to a contagion that at best plays only a comparatively infrequent and subordinate rôle.

PRIMARY ANTISEPTIC OCCLUSION IN MILITARY PRACTICE,

With Cases from the Big Dry Wash Fight, near Generals' Springs, Arizona, July 17, 1882.

By H. I. RAYMOND, A.M., M.D., U. S. A.,

late house surgeon to bellevue hospital.

A perusal of Karl Reyher's pamphlet on "Antiseptic Military Surgery," published among Volkmann's Klinischer Vorträge and giving the author's own experience in the "Battle of the Red Cross," convinces the reader: first, that the "antiseptic occlusive" method of treatment of injuries inflicted by the cylindro-conoidal bullet projected from a Springfield or other modern rifle or carbine is, when applicable, *the best treatment*, and, second, that this method by occlusion has a *very wide range of application*.

In this article Reyher sets forth the merits severally of (1) *non*-antiseptic occlusion or the healing of a wound, as, for example, under a blood-clot scab, without surgical interference; (2) primary antiseptic occlusion or the healing of a wound under an occlusive covering, as in the first instance, but with antiseptic precautions; (3) primary antiseptic drainage, or the thorough disinfection of a wound inflicted by contact with the surgeon's probe or finger, or air and dust particles or other foreign body, and the insertion of drainage-tubes to drain off the secretions of the wound before the setting in of the suppurative stage—indeed, intended to forestall suppurative action, to head off and prevent the setting in of inflammation, and to allow of reparative reaction and secretion; (4) primary resections and amputations; (5) intermediary drainage, resections, and amputations; (6) secondary methods of treatment (drainage, resection, and amputation), treatment established after suppurative action has set in.

All these methods, when properly employed, are conservative, although all are not antiseptic. The two adjective terms are not synonymous, since conservative surgery was practised long before antisepsis was known, but antiseptic treatment makes conservatism in surgery more widely applicable.

Karl Reyher's tables of statistics, collated from his own experience, are so overwhelmingly convincing and yet apparently so incredible, and withal an innovation in respect to his primary antiseptic occlusive method as applicable to so large a proportion of wounds inflicted by the cylindro-conoidal bullet, and the per cent. of mortality of primary antiseptic occlusion as compared with even primary antiseptic drainage so surprisingly small, that one may justly hold the theory in reservation until afforded an opportunity for a practical test of its claims in the treatment of wounds under his personal supervision.

This opportunity came to the writer when he was ordered to proceed at once to the scene of the recent engagement with hostile Indians near Generals' Springs, and take charge of those wounded in the fight with the White Mountain Apaches.

These cases, numbering seven (exclusive of slight wounds), together with two pistol-shot wounds of the knee-joint occurring in Bellevue Hospital during the writer's interneship, will serve in this paper to illustrate the primary antiseptic occlusive method and emphasize its claims and merits as paramount to those of any other recognized procedure in any case to which they are applicable. "To provide a condition of our operation (gun-shot?) wounds that shall put them fully on a par with subcutaneous injuries is plainly the ideal of our art."

Nature affords us the best examples of the primary occlusive method *without antiseptics*, as in her healing of wounds under a non-antiseptic blood-clot scab. After the Nez Perces campaign in 1877, General Howard remarked how surprisingly Indians could bear hardships; that he had often met Indians whom he had known to be wounded and gotten well without surgical treatment *again* upon the war-path a few weeks subsequent to injury. The fact is that in Indian warfare (on horseback) the savage, when shot, keeps in his saddle, and, riding on his steed, his wound escapes the surgeon's probe and finger; a clot of blood—Nature's hemostatic—excludes the air and dust, and the Indian, by this *lasser faire* management, virtually entrusts the care of the wound to the hands of nature. If, now, the surgeon could add thereto his antiseptics to the exterior of the wound without yielding to the temptation to insinuate a probe or pass his finger into its interior, the treatment of the case would be ideally perfect, and would illustrate an instance of primary antiseptic occlusion.

To secure the application of this treatment *upon the battle-field* to the majority of wounds before any meddlesome interference on the part of the attendant or surgeon should be the aim of every well-informed military surgeon.

That there is nothing impracticable in realizing this desideratum at or near the field or place of reception of shot wounds ought to be apparent, since all that is absolutely necessary are carbolic acid solution (the carbolic acid may be transported chemically pure), iodoform in crystalline form, pledgets of cotton-flannel, and roller bandages.

It is to be lamented that too often in civil life, with all its practicabilities, a shot wound adapted to treatment by primary antiseptic occlusion loses its golden opportunity by contamination from an ill-advised inspection, and must fall one notch below in the category and come under treatment by primary antiseptic drainage, which, though more desirable than intermediary or secondary methods, does not afford results comparable with those which may be obtained by primary antiseptic occlusion; by which is meant, treatment sans *probe, sound or finger,* sans *extraction of bullet,* sans *drainage,* sans *everything except disinfection of the exterior of the wound and occlusion of the same.* It is astonishing how widely applicable to the treatment of wounds inflicted by the cylindro-conoidal bullet of modern warfare is this primary antiseptic occlusive method, for the entrance of the missile is small, and since in war the aim is to wound and not to kill, this slot-like *entrée* would seem to accord with the humane principle; and, moreover, the projectil

in its transverse diameter is so small and its velocity so great that seldom are large shreds of clothing carried within, as was too often the case with the round bullet.

To illustrate how insignificant the entrance of a bullet often is, and how well adapted for primary occlusion such a wound is, being virtually from the moment of reception a subcutaneous injury, the lips of the wound being alone infected by contact with the external world, I might cite an instance which occurred in the hot month of August, 1870, while a scouting party were following an Indian trail in one of the Western territories. After a brief encounter had taken place and the medical attendant and hospital steward were caring for the wounded, they came upon a man lying in a moribund state.

At a glance no external sign of injury could be detected about his chest or abdomen, and the case was supposed to be one of sunstroke or apoplexy, when by close inspection a narrow button-hole slot, situated over the manubrium, came to notice. Here, then, was a wound which might have been dealt with as a *subcutaneous* lesion, with the single addition of antiseptic cleansing of its superficies. This principle of antiseptic occlusion is carried out by Prof. E. von Bergmann in his treatment of compound fracture of the penetrating variety, as cited by the *Quarterly Epitome* for December, 1881, to Braithwaite's Retrospect, as appearing in a paper translated in the *London Medical Record* from the *Wien. Med. Woch.*, No. 10, 1881. The *Quarterly Epitome* states that Prof. E. von Bergmann, in his treatment of penetrating fracture, deviates from the rules laid down by Volkmann for the management of open fractures in general. "By penetrating fracture is meant that form of fracture in which the skin is perforated at one small spot by the sharp extremity of bone." In dealing with such a case from the start, Dr. von Bergmann does not dilate the wound and endeavor to establish primary disinfection. He restricts his action to careful cleansing, by solution of carbolic acid, of the surface of *the injured limb*, and to washing out of the small wound. In case of compound fracture with large and gaping wound, this author follows Volkmann's practice of attempting primary disinfection. The latter case is comparable, of course, to large shell wounds, which demand primary antiseptic drainage, and do not permit of occlusion, or to a case complicated with primary hemorrhage in which the necessity exists to cut down upon the bleeding vessel and ligate, or in the event of clothing and other foreign material exclusive of the bullet being carried into the wound in such quantity as to necessitate its removal and a thorough primary disinfection of the entire wound.

On the other hand, Prof. von Bergmann's treatment of a compound penetrating fracture is identical in principle to the management of virtually a subcutaneous (penetrating) gun-shot injury, whether complicated or not with fracture of the bone, inasmuch as his object is to exclude all irritating and infecting entities by occluding the stoma of the wound. Now, in certain purse-like constricted wounds which are not uncommon from the cylindro-conoidal bullet projected from a Springfield rifle, this stoma becomes an outer vestibule and prevents the admission of infecting media into the sanctum within. Whether the bone be fractured or not, the lacerated veins and lymphatics stand ready to carry any obnoxious material into the circulation, and thus induce systemic infection, and it is obligatory upon the surgeon to prevent, by primary antiseptic occlusion, the possibility of infection in these flesh wounds, as it is plainly his duty in the probability of the same when the medulla of the bone is exposed.

Although of all methods of primary treatment of gun-shot injuries, including *non*-antiseptic occlusion as under a blood-clot scab, primary antiseptic occlusion, and primary antiseptic drainage, none will be found more widely applicable than the primary antiseptic occlusive method, yet, however, if a wound that is fresh be certainly infected by the entrance of dust particles or floating germs, or from any source whatsoever, the occlusive method is not applicable without harm, in that it would shut up foul secretions within. The entrance of air in such small quantity that it may be readily absorbed, or the presence of a small spiculum of bone as of a rib, or a small shred of flannel shirt or leather belt, does not, as a rule, preclude occlusion, for the former may be absorbed before putrifying, and the latter may become encapsulated like a retained bullet or may work its way out later when the dangers of suppuration and putrid infection are past.

These conditions of the entrance of air and the presence of particles of foreign substances are exemplified in two of the cases cited below and treated by the occlusive method. It becomes, therefore, in certain cases of doubtful infection, a nice question to discriminate whether the wound should be treated by occlusion or openly.

To excite a debate upon these vexed and mooted questions, Langenbeck, in the congress for surgery, proposed the following interrogatories: 1. "What cases of wounds should be treated under the scab (antiseptic)?" 2. "What under primary and secondary drainage?" 3. "What wounds are adapted to the open treatment?"

This paper has to do mainly with the first interrogatory.

So much, then, for the theory of occlusion with antiseptic precautions from the start; now as to its practical workings and results. The principles of primary antisepsis should be introduced upon the field of battle or place of reception of wound. Nos. I. and II. are cases of pistol-shot wounds of the knee-joint—one a girl and the other a boy of about the same age, twelve years, who were admitted into Ward —, Bellevue Hospital, in 1881, immediately upon receipt of injuries. The cartridge in the girl's case sank deep into the patella, from which it was immediately extracted by the surgeon, and a probe passed into its bed to determine whether or not the missile had opened the joint cavity. The wound was then occluded antiseptically, but not without being previously infected by contact with the foul air of a hospital ward and the surgeon's germ-carrying probe and finger. The further history of the case was the substitution of primary drainage for occlusion, the setting in of phlegmonous erysipelas, but finally recovery, with an anchylosed joint.

Heeding the lesson, the surgeon in the case of the boy, whose bullet grazed the lower edge of the patella on the inner side of the mesial line, applied, without preliminary manipulations, a primary antiseptic occlusive dressing, and caused the limb to be kept at rest. In six weeks the lad was about on his limbs, and the affected joint was restored without anchylosis. The temperature during the first ten days ranged at about 1° above the normal.

The surgeons, seeing the result of this primary antiseptic occlusive treatment, were divided in opinion. Some said the ball did not enter the joint

proper, but had lodged in the abundant loose cellular connective tissue below the patella.

These based their judgment upon the preconceived supposition that did the boy recover with full use of his limb, it would be evidence on its face that the injury was not *intra*-articular.

I am persuaded to the contrary since my perusal of Professor Karl Reyher's article, to which I had access through the choice library of Dr. Albert Adler, U. S. A., on the treatment of gun-shot injuries of the joints. In this article are cited five cases of shot injuries of the joints, with lodgment of the projectiles, all of which healed without anchylosis under a dry blood-scab, *i.e.*, by primary occlusion *not* antiseptic. Why, then, should we expect less from primary *antiseptic* occlusion?

In one of Reyher's tables, comprising 16 cases of knee-joint shot injuries, with lodgment of the projectile, treated from the start by *conservative* treatment, 4 of the 16 cases recovered and retained their movements, being treated *from the beginning* on *antiseptic principles*. In 8 of the 16 cases, on the first day after the injury there were no antiseptic precautions, but probing and digital examination and no drainage being the steps taken, and then the antiseptic treatment was applied. All 8 cases proved fatal. The remaining 4 cases received at no time antiseptic treatment, and were also fatal. Fresh from a perusal of Karl Reyher's pamphlet, and impressed with the lessons of his experience, the writer, being sent to the scene of hostilities to take charge of the wounded, determined, if no infection had been communicated to the wounds by probe or finger or other foreign body, to occlude the same antiseptically, and without extraction of the bullet unless, as in one case, it presented subcutaneous. On arrival at Generals' Springs I found the wounded under the charge of a surgeon who had immediately applied to all the wounds—for it was applicable to all without exception—a primary antiseptic occlusive dressing.

Although, as the sequel shows, the occlusive method in the case, complicated by pneumonic solidification and resolution, could not be strictly carried out on account of an abundant serous effusion within the chest, and, later, the discharge of some laudable pus, yet, however, no drainage-tubes were required, or the introduction of an instrument or injecting fluids within the external wound. Drainage was allowed to proceed through the wound and to seep through the loosely packed oakum or other porous antiseptic material placed as an "occlusive" covering over the wound.

The manner of the dressings applied to all these wounds on the battle-field was simple in the extreme, and it proved no less simple in execution than effective in beneficial results. It is sometimes as imperative to know what not to do as what to do. An error of commission is as gross as one of omission. In these dressings the wounds were not probed; their interiors were not disinfected, for the reason that they had not become infected; no drainage-tubes, capillary or larger, were inserted, and no bullets would have been searched for and extracted, if any had lodged, unless presenting immediately beneath the skin. The stomæ of the wounds and the superficies were given an antiseptic cleansing with a two and a half per cent. carbolic acid solution, and a pledget of cotton-flannel, smeared on its inner surface with iodoform salve, was applied to the mouths of the wounds and retained by adhesive straps and roller bandages. If antiseptic gauze and bandages had been at hand they might have been employed, the latter in lieu of the common bandage and the former as a moistened antiseptic layer immediately superimposed upon the pledget of cotton, or upon the wound itself if the crystalline iodoform had been previously dusted upon the part. In case of a wound of the chest followed by an abundant serous or sanguinolent effusion, as in one of the cases cited below, being complicated by an extensive pneumonia, the escape for this fluid through the stoma of the wound should not be obstructed by a pledget of lint or allowed to become clogged by the iodoform crystals being matted together into a pultaceous mass by the effusion. In case of such effusion the occlusive method should give way in part to the method by drainage, for the secretion, especially if it became thick and purulent, must be gotten rid of.

Reyher's tables Nos. X. and XIV. give to antiseptic occlusion a large majority of recoveries over antiseptic drainage, in proportion to the number of cases, both in shot injuries complicated by compound fracture and by opening of a joint cavity. Of 18 joint shot injuries treated by primary antiseptic occlusion, 1 died; of 9 treated by primary antiseptic drainage, 3 died; of 8 primary antiseptically handled compound fractures treated by occlusion, 1 died; of 14 by drainage, 3 died. All the cases of wounds (excepting abrasions), numbering seven, received at the Big Dry Wash fight, are presented below, and added thereto is one pistol-shot wound received at target practice two months later. The occlusive method was applicable to all. Of these eight wounds treated by antiseptic occlusion, not one proved mortal.

Case III.—Lieutenant ——, Third Cavalry, was wounded through the fleshy belly of the biceps while that muscle was in contraction; the left humerus suffered an oblique compound fracture at junction of middle with upper third. The bullet passed out of the arm, impinged upon and fractured the fourth rib a little anterior to mid-axillary line, and was reflected by this rib around and outside the chest wall to a point near the inferior angle of the scapula. At this point it became subcutaneous, and was extracted by Dr. Ewing through an incised wound which healed by first intention.

The wounds were dressed within twelve hours after reception by an antiseptic cleansing of their superficies and an occlusion of the entrance and exit by a square of sheet lint spread with iodoform ointment. A plaster-of-Paris splint for the fractured limb was applied from the wrist over the elbow, and upon the shoulder like a cap. A fenestrum exposed the seat of the wounds to view. This splint held the bones securely and in good position during transportation by a mule litter over ninety miles of rocky and hilly country. While en route from Generals' Springs to a post hospital the condition of the pulse, respiration, and temperature for the fourth, fifth, and sixth days after the fight was as follows:

July 21st.—8 A.M.: pulse, 172; respiration, 28; temperature, 99¾°. 2.30 P.M.: pulse, 72; respiration, 25; temperature, 99¾°. 11 P.M.: pulse, 72; respiration, 23; temperature, 100½°.

July 22d.—8 A.M.: pulse, 62; respiration, 28; temperature, 99¼°.

July 23d.—8 P.M.: pulse, 60; respiration, 20; temperature, 99°.

It is fair to state that the lieutenant's pulse is normally far below the average in the number of its beats, as ascertained previous to the fight.

The wounds were re-dressed about every forty-

eight hours for the first week, and at intervals of three or four days thereafter. The incised wound that had healed by first intention opened again to give exit to a fragment of a fractured rib, and then immediately united once more. The other wounds were filled by granulation tissue and closed before a month had passed by. Sufficient callus had, by this time, been thrown about the ends of the fractured humerus to insure a good union, *and the healing of this compound fracture seemed beset with no more dangers than those attending a fracture of the bone where the integument has remained intact.*

The only "constitutional treatment" that could be instituted for ten days subsequent to the fight was a soldier's ration, inasmuch as neither milk nor other suitable nourishment, nor ice, nor tincture of iron as an internal antiseptic and tonic, could be had for administration.

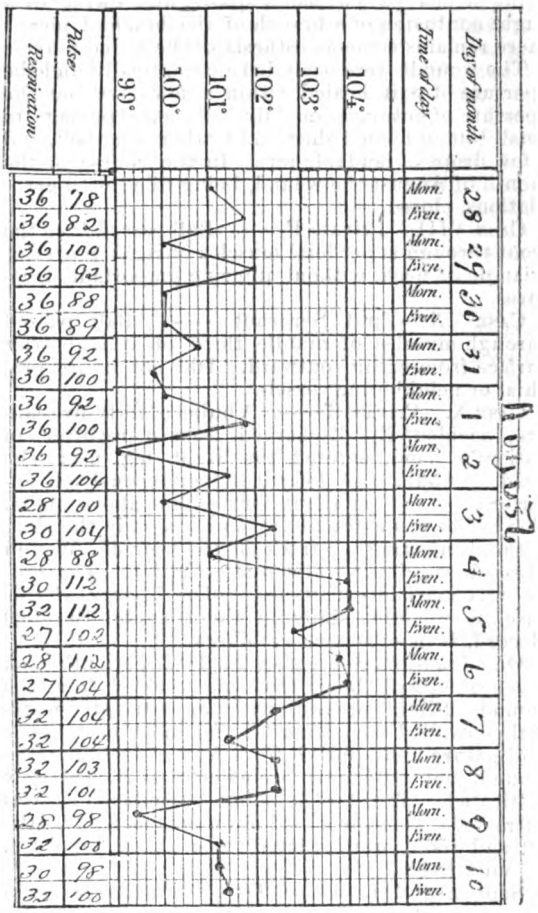
But as Mr. Lister, in *The Lancet*, November, 1881, intimates that if we can provide a condition that shall put our operation wounds (shot wounds) fully on a par with subcutaneous injuries, why should we feel any more concern for the constitutional condition of our patient who has a wound that can be antiseptically occluded than we do for a patient who has a simple dislocation or fracture?

The bullet extracted from Morgan's back was cylindro-conoidal and of forty-five calibre. The treatment in Morgan's case was typical of that instituted in the other seven cases.

Case IV.—Lieutenant C——, Sixth Cavalry. The ball struck near the external angular process of the frontal bone, immediately over the suture, uniting this process to the malar bone. The wound looked most like an abrasion, and gave no indication that the ball had entered and lodged in the orbit. An ophthalmoscopic examination by Assistant Surgeon J. V. Skinner, U. S. A., did not reveal the disc, and as by indirect examination by reflected light the anterior chamber appeared normal, the supposition was that the ball, by its concussion, had ruptured the choroidal vessels and caused a detachment of the retina with hemorrhage into the posterior chamber. The flesh wound, for the most part, healed by primary union under an antiseptic occlusive covering. The mischief done the eye by the bullet in its course was so serious that it was feared sympathetic ophthalmia would be set up, and therefore the lieutenant was advised to consult some eminent Eastern oculist. On consultation in New York it was deemed necessary to remove the eye, as sympathetic trouble threatened. On enucleation of the eyeball the bullet was found lodged in the orbit near the base of the frontal lobe of the brain. The query arises whether or not the damage to the eye was caused by the bullet in its course or by its lodgment and presence? Or, in other words, would probing for and removal of the bullet immediately upon receipt of the injury have prevented the inevitable loss of the eye or the setting up of sympathetic ophthalmia in the sound eye?

Was there any contra-indication, at the start, to the application of the primary antiseptic occlusion to this wound also? This case will at least serve to illustrate how slight may be the abrasion of the skin from a bullet, and hence how well adapted for occlusion such wounds are.

Case V.—Private M——. Ball entered right chest just below sixth rib, and escaped at lower border of tenth rib, at a point crossed by the mid-axillary line. The ball passed through the lung and pleural cavity, fracturing the tenth rib at exit. From moment of reception patient's breathing was oppressed, owing to aspiration of air through the wound at each inspiratory act. This aspiration continued until the wound was occluded and bandaged by the surgeon. No pneumonia followed. Both wounds closed within a fortnight (July 31st).



Case VI.—Private W——. Ball entered one-half inch to right of the eleventh dorsal spine, and escaped between sixth and seventh ribs, fracturing sixth rib. In five days the crepitant râle was heard, and a pneumonia was set up which involved successively the three lobes of the right lung, and after resolution had set in in the right lung the lower lobe of the left became involved in the pneumonic process. The heat of the atmosphere was oppressive, and the journey long and tedious. Stimulants were given freely as the heart began to fail, and the pulse and respiration went up respectively to 140 and 44. On the tenth day after the injury a serous effusion began to discharge itself from the pleural cavity by way of the aperture of exit of the bullet. This effusion amounted to an ounce or two a day, and emitted a sweet, healthful, non-putrefactive odor. On August 3d, corresponding with the rise of temperature on the chart, this liquid effusion became of a creamy consistence, and consequently did not drain away so readily. In the meantime the posterior opening or aperture of entrance had closed.

Two months after injury the post surgeon in charge of this case kindly communicated to me that the wound on anterior aspect of chest had not yet

closed, and that there was a slight discharge of healthy character.

Case VII.—Sergeant C——. Ball entered at a point along the posterior border of the sternocleidomastoid, on a perpendicular line dropped from mastoid process, and made an exit of one-fourth of an inch to the right of seventh cervical spine. Immediately on being struck patient had a spasm, and owing to a slight contusion of a branch of the brachial plexus there remains some anæsthesia of the radial nerve.

The wounds were occluded antiseptically and the aperture of exit healed within a few days, but the aperture of entrance, on July 29th, gave passage to small bits of flannel shirt and leather sling-belt, and a few drops of laudable pus. In the course of the month of August the wound, being filled with granulations, closed.

Case VIII.—Private F——. Ball passed from the front through superficial muscles of right posterior triangle of neck, without injuring important structures.

Case IX.—First Sergeant ——. Ball passed through muscles of middle third of arm, anterior surface from within outward. Did not injure brachial or neighboring vessels.

Case X.—Private T——. A bullet of forty-five calibre, accidentally discharged from a revolver in patient's hand, entered the right leg near the head of fibula, and lodged subcutaneously on anterior aspect of leg about four inches above ankle. The bullet was extracted by an incision in the skin, without infecting the track of the wound. Wound dressed by primary antiseptic occlusion. The bullet was markedly flattened. The history of this case, as recorded daily in the Hospital Surgical Record, is in substance as follows:

On admission, September 21, 1882, patient's sock was soaked with blood that had trickled from the wound. Slight pressure with an antiseptic material controlled the oozing for the most part, hence no ligature was applied from fear of infecting the wound, but antiseptic occlusion was immediately instituted. The bullet, being subcutaneous, was extracted. Tinct. iron and quinia respectively, gtts. xv. and grs. v., were ordered to be administered t. i. d., milk freely.

September 22d.—Pulse, 95; respiration, 20; temperature, 100°. The dressings being wet from oozing of blood, the wound was again dressed and bandaged as on the day previous. Assistant-Surgeon Skinner and Dr. Allen, U. S. A., were present. This was the *second and last dressing of the wound for ten days*, at the expiration of which time I unbandaged the limb in the presence of Dr. Allen, and found the track of the wound healed and closed, the incision made for the extraction of the bullet healed by first intention, and a superficial ulcer alone marking the entrance of the missile.

September 23d (third day).—Temperature, pulse, and respiration nearly normal. No indication for change of dressing. Nothing done.

September 24th to September 30th.—Nothing done.

October 1st.—Dressings removed; healing accomplished; the wound dressed and treated further as a small superficial ulceration.

Any military surgeon could treat at one time fifty cases, without fatigue, of shot wounds of such character as Case X., *i.e.*, to which the primary antiseptic occlusive method was applicable.

In a recent paper referring to shot injuries an eminent German surgeon observes: (1) That if suppuration be prevented, the worst kind of bullet wounds can be cured; (2) that the bullet inflicts its injury in its course, and that its presence is not, as a rule, the cause of suppuration, but the bullet usually becoming encapsulated, is innocuous; (3) that septic matter causing infection of the wound and leading to suppuration is generally introduced from without by probing and digital examination, or in the attempt to extract the bullet; (4) that the principle in the treatment of shot wounds "do not do any damage," and the observations of Reyher, Bergmann, and others upon this subject are sound doctrine; (5) that the laity should be taught how small is the damage done by the bullet itself in most cases, and how fearful and real is the danger of infection of the wound from extraneous causes.

Progress of Medical Science.

Transplantation of Muscle.—Dr. Helferich, of Munich, after the removal of a large fibro-sarcoma from the biceps muscle of a woman, aged thirty-six, refilled the gap left vacant with a freshly cut piece of muscle taken from a dog, fastening the same with six lower and thirty upper catgut ligatures. A cure followed the antiseptic treatment. The patient can now readily flex and extend the arm. An electrical examination instituted by Ziemssen did not show any abnormality, and it appears therefore that the transplanted muscle has retained its vital functions.—*Berliner Klinische Wochenschrift*, No. 26, 1882.

An Undescribed Disease of the Newly Born.—From the most prominent symptoms this disease has been described under the name of "Cyanosis febrilis enteritica perniciosa cum hæmoglobinuria." The disease makes its appearance on the first, second, or sometimes as late as the fourth day after birth. The following are the most prominent symptoms alluded to: Cyanosis, icterus; urine of a light color, or more or less of a dark-brown, which may contain hæmoglobin, normal bladder epithelium, large quantity of "granular casts," red blood corpuscles, micrococci, detritus, urate of ammonia, and a small quantity of albumen; subnormal temperature; frequent dark yellow alvine discharges; increase of the white blood-corpuscles, and the blood contains the remains of the broken-down red corpuscles and movable bodies. No increase or hardening of the connective tissue; liver a little enlarged, almost entire absence of "chest symptoms," convulsions, subsultus, nystagmus, convergent strabismus. Post-mortem examination revealed the following changes: Infarction of the papillæ of the kidney, dilatation of the stomach, ecchymoses in the intestines; enlargement of Peyers' and the mesenteric glands, hyperæmia and congestion of the mucous membrane of the larynx and bronchi; œdema of the brain, dilatation of the ventricles, congestion, with here and there effusion of blood. Of the etiology nothing is known.—*Obstetric Gazette*, August, 1882.

Mediastinal Sarcoma.—At a recent meeting of the Dublin Pathological Society, Dr. J. W. Moore presented a mediastinal sarcoma, obtained from the body of a female servant, aged fifty-five, who had died at the Meath Hospital soon after admission.

She had been complaining for the past four months of pains in her arms, chest, and limbs, which were getting worse every day. On inspection, the right side of the chest was almost motionless. The

percussion-note was exceedingly dull, and, on auscultation, one or two loud bubbling râles were the only evidence of respiratory movement. The left lung appeared to have taken on compensatory action, and was doing its work well. The right arm had become œdematous two or three days previously, and was cold, but had a distinct radial pulse. The lower extremities and the left arm were normal in size and warmth. The head was healthy, and her mental faculties were unimpaired. Her state did not seem urgent; but at ten o'clock at night a change for the worse set in, and she died at seven o'clock next morning.

At the autopsy, on cutting through the right costal cartilages, a new growth of a brownish yellow color, having the appearance of hyaline cartilage, was noticed between and around them, extending from the second rib to the level of the diaphragm. This mass was thicker below, where it formed an ill-defined tumor one inch in thickness. The new growth passed backward to the spine along the diaphragm, principally on the right side, which was thickened in consequence. Along the spine it extended upward to the third dorsal vertebra, and downward to the fourth lumbar. The tumor was intimately adherent to the spine. The right lung was completely collapsed and absolutely airless; it was covered by a greatly thickened pleura, in which there were adhesions of very old standing. The left lung was congested, and in a condition of collateral hyperæmia, and the pleura on that side was considerably thickened. The heart was apparently healthy. The thoracic aorta and the abdominal aorta were surrounded by the growth, in which they had formed a tunnel or canal. The upper part of the growth was close to the trachea, and it surrounded the innominate artery, although it did not seem to have occluded it. The lymphatic glands behind the liver were much enlarged. The liver itself presented appearances of perihepatitis of old standing, and the left lobe was considerably atrophied, and in a state of cirrhosis.—*Dublin Journal of Medical Science*, September, 1882.

Treatment of Chronic Cystitis by the Vesical Curette.—Dr. W. H. Mussey, of Cincinnati, has devised a curette for scraping the surface of the bladder, where such a manipulation appears to be indicated. The instrument consists of a solid steel sound (No. 20 American scale), with a very long curve, in contrast with the so-called "Van Buren curve," which is short and abrupt. After suitable dilatation of the urethra the surface of the bladder may be thoroughly scraped, and the scrapings removed. The organ is then subjected to careful irrigation by means of a large silver catheter.

In several cases of suspected stone, Dr. Mussey claims to have effected a rapid and complete cure by scraping out the bladder, followed by irrigation. As a wash for the bladder he uses an emulsion of gum benzoin, one ounce in one pint of water, which should be boiled for six hours, and filled to one pint. In some cases he finds it advantageous to add carbolic acid or boracic acid in varying proportions to this emulsion.—*Columbus Medical Journal*, September, 1882.

The Blood of Animals Living at High Altitudes.—The difficulty of respiration which affects animals, as well as man, suddenly removed from plain or champaign country to lofty mountain regions is well known, whilst after residence in such regions for some time the system seems to accommodate itself to the new conditions, and exercise can be undertaken and efforts made which at first were impossible. The recent observations of M. P. Bert afford to some extent an explanation of this, for he has shown that the blood of the natives of elevated regions, and the blood of animals acclimatized to such regions of low barometric pressure, are characterized by having an unusually great capacity of absorption for oxygen, much greater than the blood of animals living at the level of the sea, and this is due to the greater richness of their blood in hæmoglobin. They have, therefore, a greater area for the storage of oxygen, which may be drawn upon for the usual metabolic changes of the body, and for that extra call for oxygen which is involved in the performance of violent muscular efforts. To invalidate this conclusion it must be shown that animals inhabiting mountain ranges possess a smaller absolute quantity of blood, which has not been noticed by any observer.

Skin Eruptions in Locomotor Ataxia.—Charcot, Vulpian, and others have observed the presence of skin eruptions (papulæ, maculæ, etc.), in cases of sclerosis of the posterior columns. These eruptions have been found to be in intimate connection with the lancinating pains of tabes. J. Strauss ("Des ecchymoses tabétiques, à la suite des crises de douleurs fulgurantes)" *Arch. de Neurologie* has now noted ecchymoses in the skin appearing in tabes after the paroxysmal pains. These ecchymoses show themselves only after the attacks are over, and they resemble the spots which result when the skin is pinched severely. They have an irregular, round shape, and their size varies from that of a split pea to that of a silver half dollar. There are, usually, several (3–4) spots in one extremity. They are painless, and are observed only after a very severe attack of pain, and according to the nature of the latter the spots are one- or double-sided. The spots are mostly to be found above the seat of the pain, and differ from Charcot's skin eruptions by not following the course of the nerve. Exceptionally, they appear on the extremity which is not the seat of the pain. Strauss considers these spots as rather frequent in locomotor ataxia, and brings them in direct connection with the morbid alteration of the posterior columns of the spinal cord. He thinks that they are reflex phenomena (irritation of the vaso-dilators). This seems possible, if we remember the hemorrhages which have often been observed in cases of tabes after gastric and rectal crises (paroxysms of intense pains beginning either in the stomach or in the rectum).

Action of Quinia and Salicylic Acid on the Ear.—In order to ascertain whether the noises in the ear produced by salicylic acid and by quinine are due to a congestion of the labyrinth, Dr. Kirchner (London *Lancet*) has instituted some experiments in the pharmacological laboratory at Würzburg. The noise in the ears is sometimes accompanied by giddiness and deafness, which, usually ceasing when the medicine is discontinued, sometimes persists as a serious malady. Kirchner employed in his experiments rabbits, cats, dogs, and guinea-pigs. His conclusions are that both these agents cause hyperæmia of the tympanum, which may go on to hemorrhage, and that the whole of the labyrinth participates in the congestion. It may become so intense that, if it last long, it will cause, of necessity, an alteration in the nerve-filaments, and it may lead to exudation. This congestion be

regards as produced by a vaso-motor mechanism. In this conclusion, however, another series of observations made by Weber-Liel and Guder does not agree. They observed carefully the symptoms produced in certain healthy individuals by a moderate dose (fifteen grains) of quinine, and noted, during two hours and a half, a gradual fall in the temperature of the external auditory meatus, corresponding to the diminution in the general temperature of the body. No hyperæmia could be detected in the meatus, the membrana tympani, or the handle of the malleus, either during this period or later. On the contrary, in five cases a slight hyperæmia which existed previously was found to disappear. The subjective noises in the ear come on at the end of an hour or an hour and a half, and continue for ten or twelve hours, while the deafness comes on one or two hours later than the tinnitus, and is greatest at the time that the general temperature of the body is lowest. Similar experiments were made with salicylic acid. Four or five grammes of salicylic acid caused a diminution in the temperature of the external auditory meatus, which falls in the course of two or three hours to 95°. No indication of congestion could be discovered, and, as in the case of quinine, previous hyperæmia became lessened. Noises in the ear came on later, and lasted longer than in the case of quinine. The deafness is very marked, and continued in some instances for several days, and in some cases in which there existed previous ear disease, the loss of hearing was more prolonged, enduring in one case for nine months. In more than half the cases giddiness came on a little after the subjective symptoms. Comparing the effects of salicylic acid and quinine, it appears that the former causes less depression of temperature and a more prolonged diminution in hearing. It is difficult, therefore, to ascribe the aural effects either to congestion or to anæmia, and if these observations are reliable, it would seem to be due to a primary nervous influence.

Curable Ascites of Alcoholists.—Ascites occurring among alcoholists is generally regarded as the result of hepatic cirrhosis, and hence incurable. In two patients, Dr. Bouveret (*Lyon Médicale*) has noticed a perfecty curable ascites. The first case was a man aged forty-five, who was a clear case of alcoholism. Following certain intestinal and gastric disorders a marked ascites made its appearance, to which relief could only be given by tapping. The patient fully recovered after nine months of treatment. Bouveret brings this case and a second similar case which he reports into relation with the ascites which Murchison has reported as accompanying hepatic congestion and Semmold has found to exist in certain cases of interstitial hepatitis, and finally with the ascites found in chronic peritonitis by Leudet and Lancereux. Differential diagnosis is impossible and only the progress of the affection can throw light on the nature of the ascites.

Myositis of the Floor of the Mouth Simulating Malignant Disease.—A previously healthy man, twenty-six years of age, complained for a few days of difficulty of deglutition, with a burning pain in the anterior portion of the tongue. Three weeks later a swelling appeared under the chin, the tongue seemed to be increased in size, speech was indistinct, and eating of solid food caused pain. When admitted to hospital, five weeks later, the tumor extended from the symphysis to the hyoid bone, was hard, elastic, and painful on firm pressure. On each side of the swelling was an enlarged lymphatic gland. The rapid growth of the tumor, together with the enlarged lymphatics, pointed to cancer of the sublingual gland, but at the operation it was found to be a diffuse infiltration of the lingual and mylo-hyoid muscles. The mass was entirely removed. Upon examination, it presented the characters of a chronic interstitial myositis, and in no part could any sarcomatous or cancerous structure be discovered. Upon the mucous membrane of the floor of the mouth was seen a small but deep ulcer, extending down to the indurated tissues. This was, perhaps, the cause of the myositis.—O. Kappeler, in the *Deutsche Zeitschrift für Chirurgie*, vol. xvi., 1882.

The Presence of Sugar in Dropsical Fluids.—Rosenbach found the existence of sugar in dropsical effusions, in the proportion of $\frac{1}{16}$ to $\frac{1}{4}$ per cent., to be almost constant. The fluid was generally taken from œdematous subcutaneous connective tissue, though sugar was also found in ascitic and pleuritic effusions, and, in one case, in congenital hydrocephalus of an eight months' child. In nearly every case the urine was carefully tested for sugar, with negative results.—*Breslauer Aertzliche Zeitschrift*, No. V., 1882.

Periodical Vomiting.—Leyden reports in the *Zeitschrift für clinische Medicin*, vol. iv., 1882, a number of cases of periodical vomiting. Sometimes these occur in connection with various affections of the spinal cord, notably tabes dorsalis, and are then known as gastric crises. Other cases of periodical vomiting occur, not dependent upon spinal cord lesions, yet often accompanied by marked nervous symptoms. These sometimes come on without apparent cause, sometimes they follow a slight indigestion, a cold, or some mental disturbance. The attacks last from a few hours to several days, and are marked by an irregular periodicity. The commencement is usually sudden. Extreme nausea and vomiting set in, together with severe pain in the epigastrium, and a number of other symptoms resembling migraine. The stomach is intolerant of all ingesta, or at most, will retain a little ice, champagne, or tea. After the cessation of the vomiting the patient feels well and enjoys a good appetite and normal digestion. Accompanying the attacks is observed a retraction of the abdomen, with obstinate constipation, which does not yield to purgatives or enemata. The urine is scanty and high-colored, and may be suppressed. The pulse is frequent, without fever. In addition to the pain in the epigastrium, there are often tearing pains in the extremities. The attacks should be treated with ice and morphine. To prevent recurrence, change of air and diversion of the mind are of most avail.

Acute Miliary Carcinoma.—Drs. Raymond and Brodeur (*Archives Générales de Médicine*, August, 1882) report a case of primary acute miliary carcinoma affecting the thoracic and abdominal serous membranes. The patient, a man seventy-six years of age, previously of excellent health, had noticed a gradual loss of appetite for four or five months, with increasing dyspeptic symptoms and progressive emaciation. Upon palpation of the abdomen, a peculiar sensation was imparted to the hands, as if a bladder filled with gelatinous material were squeezed. In the epigastrium and iliac fossæ could be felt little nodosities of the size of a pea or haricot. There was no ascites present, and though the percussion-note was a little dull, it did not vary

with the position of the patient. The abdomen was sound and but slightly sensitive, though a little pain was complained of on pressure in the epigastric region. Examination of the chest revealed nothing abnormal. The urine contained neither sugar nor albumen. The patient died six weeks after coming under observation. At the autopsy the entire peritoneum was seen to be thickly studded with smooth, reddish colored nodosities from the size of a hemp-seed to that of an almond. The peritoneum was injected, especially around the bases of the little tumors, but there were no adhesions in any part. The same conditions were noted on the pulmonary surfaces of the pleuræ and on the visceral surface of the pericardium. Some nodules were even found in the endocardium covering the tricuspid valve. These tumors were composed of a delicate, almost fibrillated stroma, enclosing a great number of variously shaped cells with large nuclei. In some places these cells were arranged in rows, as is ordinarily observed in cancer developing from mucous surfaces. Nothing of note was discovered in any of the abdominal or thoracic viscera. The brain and spinal cord with their membranes were normal. From a study of this case and of others reported by various observers, the authors derive the following conclusions: The disease is one of advanced life, and is not hereditary. The symptoms are those of indigestion, the mild nature of which, however, together with the absence of pain, exclude the idea of cancer of the stomach. A valuable sign is the sensation imparted to the hands as of a bladder filled with gelatine. Miliary carcinoma of the serous membranes is not secondary to cancer of any of the viscera. The prognosis is fatal, the disease progressing rapidly and always terminating in death.

Hydatid Cyst of the Heart.—Dr. Arnold reports the case of a young man, twenty-one years of age, who had been subject to fainting spells—heart's action energetic, but the pulsations regular and normal—cyanotic condition of skin, without true respiratory embarrassment, general and confluent urticaria, manifest tendency to algidity. The autopsy discovered three hydatid cysts at the apex of the left lung; in the pulmonary artery numerous free hydatids of all sizes, still more hydatids in the right ventricle. In the right auricle a cystic tumor, semi-collapsed, with an enlarged slit-like opening toward the tricuspid orifice, and filled with hydatids; the liver and spleen contained no cysts.—*Canadian Journal of Medical Science*, October, 1882.

Tumors of the Fourth Ventricle.—According to Drs. Spillman and Schmidt, tumors of the fourth ventricle may be divided into two classes: those arising in the parts around the ventricle, and those springing from the ependyma and choroid plexus. The tumors arising from the choroid plexus are usually of epithelial structure, sometimes very vascular, at others without a trace of vessels. Those which take their origin from the ependyma are formed at the expense of the connective tissue, and may be either soft sarcomata, gliomata, or fibromata. Occasionally we find cysticerci and tumors of syphilitic or tubercular origin. The varying symptoms of this condition depend upon the direction of growth of the tumor, with consequent pressure upon various parts. In some cases there is a remarkable tolerance of the new growth, so that almost no symptoms are produced. In other cases the presence of the tumor is manifested by a single symptom, as diabetes. The most frequent symptom is cephalalgia, seldom localized, often intense, and occasionally presenting regular intermissions. Tactile sensibility is usually normal, though in a small number of cases incomplete hemianæsthesia has been observed. Motor disturbances are very common. Sometimes there is a general paresis of all the muscles, at other times more or less complete hemiplegia. An ataxic gait, increased or not by closing the eyes, has been occasionally observed. Choreic movements may occur. In one-half of the recorded cases there were disturbances of the intellectual faculties, loss of memory, apathy, slow response to questions, or even delirium. Epileptiform convulsions sometimes occur. Vomiting is a very frequent symptom. Sudden death was noted in over one-half of the cases. The diagnosis is usually difficult, the only symptom directly referable to a lesion of the fourth ventricle being diabetes. This condition is often absent, and even when present is not sufficient, taken by itself, to render a diagnosis certain.—*Arch. Gén. de Médicine*, August, 1882.

Delivery with Membranes Unruptured.—Dr. Van Peyma relates this case with somewhat unusual features. He was called to attend Mrs. B—— in fourth labor; previous parturitions normal. On arriving at the house and making an examination, he discovered protruding from the vulva a smooth amniotic sac containing the fœtus. Upon applying slight traction by means of a towel wrapped around the mass, it was easily removed. The uterus immediately contracted firmly, and so continued. Upon examination of the sac and contents, it was found to be the entire unruptured amniotic sac, containing the dead fœtus, as well as placenta, etc. The contents were easily recognized on account of the transparency of the membranes. The mother's last menstruation occurred more than six months previous, and the fœtus had the appearance of having passed that age.—*Buffalo Medical Journal*, August, 1882.

Eye Diseases in General Diagnosis.—It cannot be denied that ophthalmology is one of the most advanced of all the branches of medical science; and considering the intimate relation of all parts of that wonderful structure of the human system, we would naturally expect to find that a knowledge of eye diseases would be of material assistance in enabling the general practitioner to arrive at a correct diagnosis of disease processes in localities far remote from the organ of vision. In fact we find it so. Therefore the paper by Dr. Wm. C. Ayers, in the *American Journal of the Medical Sciences* for October, in which he calls attention to some of the salient points in which eye-symptoms can aid in general diagnosis and prognosis, is particularly valuable.

He divides his paper into two parts: 1, internal eye diseases, or those detected with the ophthalmoscope, and, 2, the relation of external eye disease to the general system, or where the diagnosis can be made without instruments. Under the first heading he refers to diagnostic points gained by the use of the ophthalmoscope in meningitis, alcohol and tobacco poisoning, leucocythæmia, and Bright's disease, while under the second he shows how examination of the eyes can assist in the localization of tumors, clots, etc. The practical nature of the paper commends it to the perusal of the general practitioner.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, October 28, 1882.

POST-GRADUATE STUDIES.

THE interest which is taken in post-graduate instruction is quite manifest by the number of letters of inquiry we are receiving in regard to the details of proposed plans of carrying out the idea.

The practitioner who has a limited amount of time and money at his disposal is anxious to learn in what manner he can turn both to the best account. There seems to be but one voice as to what should be done to make the course successful. Clinical instruction is insisted upon as the prime necessity, while the hope is expressed by the would-be patrons that didactic lectures will seldom, if ever, be delivered. The latter method of instruction is thought to be well enough in its place, but not adapted to the real requirements of the physician who wishes to study the diagnosis and treatment of disease by direct and practical methods. In all this the general practitioner takes the proper ground, and, as far as we can learn, the different post-graduate schools are in accord with him in their endeavors in that direction. In all these courses the aim appears to be to make clinical instruction the pivot of success. Each school has a dispensary attached to it which furnishes the material for illustrating practical points in diagnosis and treatment of the commoner as well as rarer diseases. In order to utilize such material to the best advantage a large corps of teachers seems to be necessary, thus making possible the systematic division of the students into small classes and giving each one the opportunity of studying the disease in the actual presence of the patient. This plan is certainly an admirable one, and must commend itself to every one interested in the better education of medical men. We make these statements in the way of a general answer to the letters of inquiry which are now being sent to us and to which we have already referred.

We have always maintained that there was but one way of making clinical instruction a success. Not in sitting in a large amphitheatre listening to a clinical lecture and looking at the patient through an opera-glass, but by actual personal contact with that patient with a competent demonstrator at hand. Hence it is that clinical instruction, as ordinarily carried on in our medical colleges, amounts to little or nothing; and hence it has been said with truth, at least concerning schools in a neighboring city, that it is possible for a student to graduate in medicine without having had the opportunity of clinically studying a single case. The college professors, no doubt, do their best to give such opportunities to every student, but with the large classes in attendance, and the impossibility of crowding into a session more than a given number of clinical lectures, the demonstrations must necessarily be made in rather a wholesale manner. Then, again, only a certain class of patients are available in an ordinary college clinic. Such cases, for instance, as can come or can be conveniently brought to the amphitheatre. We mention these facts not so much for the purpose of complaining against a system which is seemingly the best that can be adopted in our medical schools as for the opportunity of saying that the post-graduate schools to be successful in their particular line must make a new and radical departure in this very matter of clinical teaching. From present indications there is good reason for believing that this will be done, or at least a good commencement will be made in the direction indicated.

It is a matter for congratulation that this is so, and that a desirable impetus will thus be given to clinical teaching in this city, not only in the post-graduate schools, but in all our large hospitals and dispensaries, so freely opened to the profession. The facilities for this kind of work on the part of our hospital physicians and surgeons are immense. They have at their disposal an amount of material which far exceeds that in any other city in this country, and there is every reason to believe that they will be stimulated to do their utmost to make the best use of their opportunities in systematizing clinical instruction in New York. To such an end it might be well for the different hospitals to set apart regular days for operation, and the different post-graduate schools to so arrange their demonstrations as to afford their patrons opportunities for still wider fields of clinical experience. There need be no conflict of interests in so doing, as the hospitals are open to all practitioners who care to follow the attending physician or surgeon through the wards, or to witness any of the operations performed by the latter.

If post-graduate instruction, as thus auspiciously commenced by the different post-graduate schools, proves to be successful in New York, the utility of actual bedside instruction will be a demonstrated

fact, and this city, with its well-equipped hospitals and dispensaries, will be in a position to make available, in a more direct and systematic way than it has ever heretofore done, its vast clinical resources. The medical colleges themselves will not care to be left behind, and clinical study will become a still more recognized feature of the regular medical course.

IN RE POULTICE.

The editor of *The Practitioner*, Dr. Brunton, has been directing attention to the subject of poultices, and, in a recent issue of his journal, describes how to make them. He offers apologies, which we hereby second, for calling the attention of a learned profession to a subject confessedly old and apparently trivial. The poultice is indeed a venerable appliance; it is coeval with man's pains and is doubtless but briefly antedated by Creation's morn. Some philosophers have even contended that the universe itself was once but a warm and mushy mass in whose homogeneous pultaceousness was contained the promise and potency of the evolved poultice soon to be described. Thus, according to these authorities, the primeval Cosmos now finds its most suggestive homology in the warmth and simplicity of the subject in hand.

However, this may be, it is certain that the poultice is a very useful thing, and it is no doubt true that many persons make poultices wrongly, and thus convert what might be made an angel of Joy into a demon of Woe.

There are cases where the poultice is needed for surgical, and other cases where it is needed for medical purposes. Often on this account some difference in its manufacture is required. In surgical cases, it is desirable to have the warmth and moisture directly upon the surface. It is the English custom, therefore, says Dr. Brunton, to make the poultice with crushed linseed or with linseed meal and oil, spread upon tow and applied to the skin without anything intervening. Such a method, though useful for wounds, ulcers, and abscesses, is not the best form of application in cases of inflammation of viscera or where spasm is present without inflammation. In these cases it is better to apply the poultice in such a way that it will be very hot and yet will not scald the skin. Dr. Brunton's method is to have made a flannel bag, a convenient size being twelve inches by eight. This is closed on three edges, the fourth having a flap. Four tapes are attached to the corners. Besides this, a strip of flannel is prepared, long enough to be wrapped once or twice around the bag. The bag and flannel, and a bowl, are then to be thoroughly heated. The poultice is made of crushed linseed and should be of rather thin consistency. It is poured into the bag, the flap turned down and fastened and the warmed flannel roller wrapped about the whole. In this way a poultice may be applied boiling hot to the skin. The heat may be retained better by applying over the whole a layer of cotton wool, or oiled silk.

The difference between a poultice made in the ordinary way and in the manner just described is often, says Dr. Brunton, very striking, especially in cases where there is spasm. Persons suffering from intense abdominal pain have been at once relieved by this form of poultice after a succession of the ordinary poultices has been used in vain.

Dr. Brunton's essay upon the poultice illustrates a fact which should be made more prominent in our therapeutics. We need to know better how to use the measures already at our command; while the experimenting with and search for new remedies should be made a more secondary matter.

THE PROGRESS IN MEDICAL EDUCATION.

The Report of the Commissioner of Education for the year 1880, just issued, contains a considerable amount of statistical information regarding medical schools.

The schools for medicine, dentistry, and pharmacy in 1880 numbered 120, against 63 in 1870. Of these there were 72 regular medical colleges, besides 6 eclectic and 12 homœopathic institutions. In the regular medical schools were 1,131 instructors and 9,876 pupils, of whom 2,673 graduated in 1880. The number of pupils and graduates from the irregular schools was: in the eclectic, 188, homœopathic, 380.

As eclecticism and homœopathy are so often associated in the popular mind with growth and progress, it is interesting to see whether such advance is really being made. We give, therefore, a comparative table for the years 1878 and 1880.

	Number.	Instructors.	Students.	Graduates.
Regular Medical Schools, 1878.	68	915	8,279	2,506
" " " 1880.	72	1,131	9,876	2,673
Eclectic Schools, 1878	6	51	448	211
" " 1880	6	65	833	188
Homœopathic Schools, 1878...	11	158	1,215	363
" " 1880...	12	188	1,220	380

From this it will be seen that homœopathic schools have increased by one, but that in students and graduates they show hardly any advance.

The eclectic schools have not increased in number, and have diminished in graduates. The number of pupils is reported to be larger, however.

It will be noticed that while medical students increased in number from 8,279 in 1878 to 9,876 in 1880, the increase in graduates is proportionately much less. We may perhaps interpret this as meaning that the requirements are more rigid than formerly.

The remarks of the Commissioner of Education upon the subject of medical education express nothing new. He finds that many medical colleges are somewhat more careful in their instruction and exacting in their requirements than they were ten years ago. He notes, also, as one of the most hopeful signs, that the profession has been roused to self-activity in the matter. On the whole, some progress, he thinks, is being made in medical education.

THE PHENOMENA OF HYPNOTISM EXPLAINED.

A WRITER in the *Philadelphia Times* takes some credit for placing before English readers a full and satisfactory explanation of the hitherto very puzzling phenomena of hypnotism. This condition, we are told, has now nothing supernatural or unexplained about it, the only uncertain thing being, perhaps, the exact anatomical condition of the nerve-centres.

The hypnotic state, as now elucidated, consists simply "in an increased neuro-muscular excitability of the cerebro-spinal axis."

The writer alluded to (Dr. Engel) bases this view upon the experiments and observations of Charcot and of Tamburini and Seppelli. The studies of these gentlemen were made upon hysterical persons, a fact which does not seem to have been borne in mind by their American interpreter. They announced that in the hypnotic state there are three different conditions: the lethargic, the cataleptic, and the somnambulic. Each is characterized especially by a peculiar change in the muscular *tonus* or neuro-muscular excitability. In the lethargic condition there is a peculiar sensitiveness of the neuro-muscular mechanism characterized by contraction of muscles on simple mechanical irritation. In the cataleptic state there is a slight general increase in the muscular tonus, causing plastic flexibility of the extremities. Finally, the somnambulic state is characterized by general rigidity of all the muscles.

The observers quoted describe and catalogue a list of agents or irritants which directly or secondarily produce these various interesting and highly scientific conditions. Certain vascular and respiratory changes peculiar to them are also noted.

The observations which our writer finds so rich in pathological significance were, no doubt, carefully made, and may apply to the hypnotic conditions produced in a certain class of hysterics existing chiefly upon the continent. That they furnish any explanation of the general phenomena of hypnotism will at once be doubted by persons at all familiar with the subject—as our writer plainly is not. The lethargic condition, into which the American hypnotic goes, is not, as a rule, characterized by any neuro-muscular hyperexcitability, such as has been described by Charcot. The phenomena that may be evoked in him are the result of suggestion or expectancy, not of irritants in the sense used, and these phenomena occur quite as often in the psychic or sensory as in the motor sphere. There is a suspension of ordinary consciousness with certain of the inhibitory and volitional powers connected therewith. There is, doubtless, an increased excitability of lower centres and mechanisms, including, doubtless, at times the neuro-muscular. But all this has been known and stated long ago. Our American elucidator of trance phenomena will learn a great deal more about his subject by studying home authors than by translating the provincial productions of Italy.

PLUMBERS AND ZYMOTIC DISEASES.

THE excellent and suggestive article on plumbers and their relations to zymotic diseases, by Dr. F. A. Burrall, has naturally commanded considerable attention. It is a matter of surprise, if not of mortification, concerning the theories regarding the propagation of sewer diseases that the plumbers above all others should escape the sickness and death which befal ordinary mortals. There are many physicians and householders who, for reasons not necessary to mention here, would be glad to know that the case was otherwise. It is quite possible that in the majority of cases in which sewer-gas is supposed to escape, and in which a plumber's services are called for and rendered, that the diagnosis is a mistaken one, although the plumber who was the first to scientifically introduce sewer-gas into our houses should know most about it. Certain it is, that such sewer-gas as they ordinarily find, they are proof against. Occasionally the plumber tells the truth, and conscientiously makes a correct diagnosis, but he is pretty certain to sicken and die as the result. At least, such, we believe, is the experience of physicians who are lucky enough to treat these cases. Unfortunately, however, for the sake of the sewer-gas theory at least, the mortality among plumbers is smaller than it should be. Their supposed immunity from disease may, in a measure, be explained by well-known influences of the mind over the body. The inevitable association of sewer-gas with a long and well-itemized bill naturally results in a state of mental exaltation, which has a tendency to ward off disease. The fouler the smell the broader the smile and the larger the bill, while conversely, it is proved that the really sick man is the one who has had the work done. There are doubtless other reasons than those referred to, or than those ingeniously and thoughtfully suggested by Dr. Burrall, which may account for the supposed immunity. But Dr. Ridlon attempts to upset all our theories by significantly asking what special influences of good or evil protect the plumber when he innocently sleeps.

THE RECENT FLOODS in New Jersey have been followed by a large amount of malarial disease.

Reviews and Notices of Books.

STUDIES IN PATHOLOGICAL ANATOMY. By FRANCIS DELAFIELD, M.D., Adjunct Professor of Pathology and Practice of Medicine in the College of Physicians and Surgeons; Visiting Physician and Pathologist of the Roosevelt Hospital; Visiting Physician and Curator of Bellevue Hospital. Royal 8vo, pp. 126. New York: W. Wood & Co.

PROFESSOR DELAFIELD'S "Studies in Pathological Anatomy," to which we have referred so frequently on the appearance of the different parts, have thus far been collected in a single magnificent volume, royal octavo size, and superbly illustrated with ninety-three full- and double-page plates. The author's object has been to describe and figure the minute lesions of disease from the material which has fallen under his own observation. In this respect the book has a peculiar value, in representing individual work in a wide and carefully cultivated field. The results of these labors are presented for what they are worth as demonstrated facts, nothing more and nothing less. As very modestly stated by our author, his plan of study simply involved the following of nature wherever she might lead. Consequently, in viewing the admirable presentation of microscopical appearances, we are privileged to sit, as it were, beside the master and almost view the specimens with his eye. And here let us say that probably in no similar work ever before published is there collected so many beautiful and valuable representations of pathological lesions than in the one before us. The processes by which these admirable results are obtained are as follows: Autographic, photolithographs from original drawings, heliotypes from original drawings, wood engravings of original drawings on the block, etchings on copper, lithographs from original drawings on the stone, artotypes of original drawings, photographs of specimens. The fidelity of these illustrations is beyond praise, while their execution in the different methods alluded to make them specimens of high art. The subjects specially treated of in the first volume are phthisis, peritonitis, pleurisy, pneumonia, empyema, hydrothorax, bronchitis, tuberculosis. The pathology of each one of these diseases is tersely and comprehensively described in connection with the plates, thus giving the reader the advantages of clinical as well as pathological study of the different lesions.

We cannot congratulate the author too warmly on the results of his labors thus far, nor can we recommend the work too strongly to the progressive student and the advanced pathologist. The volume is elegantly printed, tastefully bound, and aside from its other merits is a triumph of typographical art.

PROSPECTIVE CHOLERA.—The following theory is disturbing the minds of some of our lay contemporaries. It is that the great outbreaks of cholera in Europe and this country have occurred at intervals of sixteen or seventeen years: as in 1817, 1833, 1850, and 1866. Between these great attacks of the epidemic there were minor returns of it, occurring at intervals of six years after the more fatal visitations, namely, in 1837 and 1854. According to this view, a most destructive prevalence of this pestilence is due in England and the States in 1882–83.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 19, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. T. E. SATTERTHWAITE, read a paper (see page 477) on

THE ORIGIN AND NATURAL HISTORY OF TUBERCULOSIS.

The discussion was opened by DR. FRANCIS DELAFIELD, who said that his own interest in tuberculosis had been principally with regard to its morphology; to the actual lesions found in the bodies of those who die of pulmonary phthisis in any form. The following were some of the conclusions he had reached from such study. It had seemed to him that there was a definite anatomical product which could be conveniently called tubercle tissue; a tissue composed of basement substance and cells, which, while it has nothing different in its essentials from other inflammatory products of connective tissue, can usually be recognized by its general character. But such tubercle tissue was not by any means identical with miliary tubercle. The term miliary tubercle simply expressed the gross appearance of certain little nodules which were found under certain circumstances, some of which were composed of tubercle tissue, and others were not. The terms miliary tubercle and tubercle tissue, therefore, might mean two different things. More than that, such tubercle tissue could be found, not merely arranged so as to form miliary tubercle, but so as to form diffuse infiltration. A somewhat coarse, but not altogether inapt, comparison existed in the condition in which pus was found; sometimes in the form of abscesses, sometimes as a diffused infiltration. So in this instance, he believed that inflammatory products might be so arranged as to form either miliary tubercle or diffuse infiltration. The study of tubercle was always complicated by the fact that tubercle tissue, if it was granted that there was such a thing, was scarcely ever produced by itself; it was almost always present in combination with ordinary inflammatory products, either acute or chronic, or both, and they were mingled in a great variety of ways. The simplest combination was found in acute tuberculosis, where the complicating products were the result of acute inflammation; that is, were serum, fibrin, pus, and new connective tissue cells, which were distinguished from tubercle tissue proper with comparative ease. When, however, investigations were extended to chronic forms of pulmonary phthisis, complicated by the products of chronic inflammation, the morbid anatomy became exceedingly difficult.

There were a few chronic forms of phthisis which were simpler than others; one form especially which might be called chronic miliary tuberculosis, in which there was simply the production of tubercle tissue in the form of miliary tubercles, with a certain amount of interstitial pneumonia and a slight amount of intra-alveolar pneumonia, but both the interstitial and the alveolar pneumonia were present in such moderate amount as to leave the tubercular lesion perfectly distinct. But in the majority of cases of chronic phthisis this did not hold true, and the tubercle tissue was complicated

by ordinary inflammation involving the cavities and walls of air-vesicles, the walls of blood-vessels, the bronchi, and the pleura; all the component parts of the lung becoming the seat of inflammation and yielding complicating products. In that manner lesions of very great complexity were produced, and yet, as he believed, in all of this class of cases, the tubercular element took a real share. So far as he knew, pulmonary phthisis never occurred *in adults* without the production of tubercle-tissue. Here he made one exception, namely, pure interstitial pneumonia, which, up to a certain degree, gave the history of phthisis, but in its entire development differed completely from ordinary phthisis. These cases of pure interstitial pneumonia were rare in New York; they were more frequent in some other localities, but they were to be excluded from the consideration of phthisis proper. Ordinary chronic pulmonary phthisis occurring in *adults* was, so far as he knew, always accompanied by the production of tubercle tissue, and more than this the quantity of tubercle tissue was such as to give one the idea that it was really the essential part of the process; that although the complicating inflammatory products were present the tubercular product occupied a greater space and was more apparent; that if the tubercle tissue had not been developed there would not have been the complicating inflammatory products; that the two conditions were associated with each other, but that the essence of the process was the tubercular part.

Dr. A. Jacobi believed that Koch's theory concerning tuberculosis was far from being proved. It was only another parasitic theory such as had been presented a number of times.

With regard to the question, Are tuberculosis and phthisis identical? he was inclined to the opinion that they were two distinct diseases. This much was certain, namely, there were many cases of tuberculosis without phthisis, and also many cases of phthisis without tuberculosis. That view, however, did not include that they could not be found together, nor did it include that tuberculosis could not become phthisis, nor that phthisis could not subsequently become or produce tuberculosis. This view afforded the only way in which he could explain a large number of clinical facts.

Concerning the parasitic theory, he had about the same objection to it as Dr. Satterthwaite had already made, and it was that it did not explain what a large number of observers held to be an essential, namely, that a diathesis was always necessary to the development of tuberculosis or phthisis. By some this family predisposition was called scrofula, meaning thereby, a condition of the individual in which cells have a particular disposition to proliferate copiously and undergo degeneration rapidly. If this diathesis is essential to the development of tuberculosis or phthisis, the old question whether so-called scrofula and tuberculosis or phthisis were not essentially one and the same process, was not at all settled.

It appeared to him that there were other important questions with reference to the subject, as it was well known there were quite a number of cases of phthisis occurring in persons belonging to families in which there was no such diathesis. In a certain number of these cases there were congenital reasons; as for instance, the children in whom the sterno-vertebral diameter was too short, were almost predestined to suffer from phthisis in later life, and only *one* individual suffered in a family where there was neither tuberculosis nor phthisis. In such cases the lungs were not allowed to expand to their normal capacity, and, although it was not an absolute necessity, phthisis frequently followed.

Again, there might have been no phthisis in a family for generations, but there had been syphilis or rachitis. A baby born under such circumstances was very liable to have a number of glandular swellings, first the bronchial glands and then the tracheal glands on both sides. In some cases these glands attained an immense size without being noticed at all, but in consequence of such enlargement there was always irritation of the mucous membrane of the bronchi with which they were intimately connected. These babies, without having pneumonia, began in early life to have a chronic cough, which got well one day and returned the next, occasionally developed broncho-pneumonia, and they suffered during the first years of their lives from bronchial catarrh, and were very apt to become phthisical from no other cause except the existence of a large number of bronchial and tracheal glands affected primarily. The lungs became affected in the same manner as did the intestines when irritated by enlarged mesenteric glands that give rise to slight or serious intestinal catarrh. When these glands underwent caseous degeneration, when they suppurated, phthisis was a very frequent consequence. In a healthy baby, catarrh of the ear, sometimes chronic nasal catarrh, might be accompanied by enlargement of lymphatic glands and when these suppurated, phthisis finally resulted in a number of cases. So also measles and whooping-cough were frequently accompanied by broncho-pneumonia, and tuberculosis or phthisis, or both, made their appearance. There were then, quite a number of cases of tuberculosis or phthisis which depended upon causes such as he had mentioned, and it would take much more evidence than he had yet seen, to convince him that the *bacillus* must be in every case the cause of the phthisis. There was a local irritation somewhere which was the cause of such processes as give rise to local disease of the lungs.

This view he regarded as one that had an important bearing upon the treatment of tuberculosis or phthisis. It was true that in some cases a vicious constitution must be attended to, but in a large number of cases, preventive treatment was entirely local. Broncho-pneumonia must not be regarded as a simple disease, for it might kill the child after six months, or a year, or five years, and it must be carefully and persistently treated. The safest way was to prevent its occurrence, and that could be done by attending to the condition of the neighboring lymphatic glands; perhaps preventing the development of abscesses about the neck by attending to an eczema of the head, and so on. He went still further; he was not one of those who believed that because morbilli and whooping-cough were self-limited diseases they could be left to themselves. So long as they were allowed to run their full course there was opportunity for broncho-pneumonia to develop. These diseases, therefore, should be cut short if possible; for, by so doing, the dangers attending the development of pulmonary complications were diminished, and the chances of prolonging life were advanced. If we could do no better we should mitigate the symptoms.

Again, it was a peculiar fact that tuberculosis and phthisis were seen especially at certain periods in life—tuberculosis mostly in early infancy, phthisis

with or without tuberculosis in later life. He believed the observations of Benecke were important in this respect. That investigator had studied the size of blood-vessels, and had laid stress upon the fact that in the infant the pulmonary artery was very much larger than the aorta, not only at its beginning but farther on. After a time this relation between the two vessels changes, but a number of years elapse before the two arteries become equal in size. Further, he also refers to the fact that, relatively speaking, the right heart is more powerful than the left at that early age. These two facts together might explain why the lungs of babies were so much more succulent, so much more given to œdema and to the development of catarrhal inflammatory processes than the lungs of adults. These facts, Dr. Jacobi thought, were worthy of consideration, particularly with the other fact that miliary tubercle was mainly found in young children. He thought that these facts required as much study as did the bacillus question, and believed that investigations in this direction would be productive of equally as good results. He did not wish to say that it would not be a great blessing to have a bacillus for every disease, for then pathology would be very simple indeed.

Dr. W. H. Welch thought that Dr. Satterthwaite's paper showed not only the prevailing views concerning the pathology of phthisis, but, at the same time showed that recent investigations tended to establish the fact that pulmonary phthisis is essentially tuberculosis. The doctrine advanced by Niemeyer that tubercles played a comparatively unimportant rôle in phthisis, that catarrhal pneumonia underwent a caseous degeneration and so produced phthisis, had been essentially changed, and at present received but little support from histological and pathological investigations. It was interesting to note that both histological and etiological investigations, conducted independently of each other, had led to the same conclusion, namely, that pulmonary phthisis was essentially tubercular in character. He was fully in accord with the views expressed by Dr. Delafield concerning the morphological changes found in the disease, and that miliary tubercle remained for us the most important anatomical criterion of the tubercular affections; but, as Dr. Delafield had shown, this miliary tubercle presents a great diversity of structure in different organs, and even in one and the same organ. It sufficed to state that histologists met with no little embarrassment when they undertook to give an histological criterion of tubercle, and its gross appearance remained for us the essential criterion. The diffuse changes which occurred in phthisis, and which we had been led to believe were tuberculous in character as much as the miliary tubercle itself, was an advance that had been made in histological observations within the last few years, particularly by the French school. What was familiarly known as caseous pneumonia, or scrofulous pneumonia, etc., had been determined to be the special result of the tubercular process, and that it presented histological structures which allied it with miliary tubercle he thought had been established. He also corroborated the statement made by Dr. Delafield that the complexity of the subject was due to the complex anatomical structure of the lung, all parts of which were usually involved in pulmonary phthisis, but at the same time there was underlying it all a tuberculous impression. It would lead too far to attempt to give in detail all the grounds upon which this opinion was based, namely, that the diffuse changes were to be regarded equally tuberculous as the nodular.

The infectious or specific nature of pulmonary phthisis had been determined by experiments concerning its inoculability and by the discovery of the bacillus. He thought the inoculability of the disease had been established. The uniformity with which tubercular eruption appears after inoculation with specific tubercular material, he thought, could not fail to convince us of the inoculability of the disease. The discrepant results which had been obtained in many cases could be explained partly on the ground of untrustworthy experimenters and partly on the ground of improper material used and improper precautions exercised.

With reference to the bacillus of tuberculosis, his observations had been eminently satisfactory. They had been largely confined to the examination of the sputum of consumptive patients, and he had been surprised at the uniformity with which the bacillus appeared. It had been demonstrable with special ease in the sputum, but so far as his observations extended it could be obtained also in the lung-tissue with absolute uniformity.

Dr. Jacobi had called attention to certain clinical facts which seemed to militate against the acceptance of the infectious theory of phthisis, but they had not seemed to him to be of sufficient weight to justify us in discarding the exact experiments and observations of Koch and other observers. The great stumbling-block seemed to be the question of heredity, but it seemed to Dr. Welch that there was one fact which had not been sufficiently impressed, and it was that the *disease* known as tuberculosis was not inherited, but it was simply a lack of resistance to the special poison of the disease which was inherited. The majority of persons possessed a certain degree of immunity against tubercles, but there were others who acquired a lack of toleration, and in such cases as Dr. Jacobi had mentioned, namely, those in which there was a short sterno-vertebral diameter of the chest, phthisis developed because the lungs were not capable of resisting the poison to which they were exposed. There were analogous difficulties with reference to other diseases, as, for example, typhus fever, to which some persons seemed to have complete immunity while others contracted the disease upon the slightest exposure. He thought, therefore, that the mere fact of immunity against the disease did not seem to be sufficient argument to justify us in discarding the more exact observations made by pathologists and histologists.

The multiple forms of phthisis had also been regarded as a serious argument against tuberculosis and phthisis being identical. But it must be remembered that a regular succession of events was frequently absent in other affections, as for example in syphilis, and the same thing had also been seen in experiments concerning inoculability. The experiments with reference to the inoculability of phthisis had shown that there was a great variety of conditions developed, varying sometimes according to the animal used, sometimes according to the amount of material used, and again according to the manner in which it was injected, etc. He believed, therefore, as Dr. Satterthwaite had concluded, that we were justified in assuming that phthisis was essentially pulmonary tuberculosis; that the diffused processes as well as the miliary nodule were essentially the same.

With reference to the inoculability of phthisis he thought the discovery made by Koch was of the

utmost importance, and that the results had not been overthrown by clinical facts, and that clinical facts could not in any degree overmatch the exactness of pathological and histological studies.

Dr. Satterthwaite, in closing the discussion, remarked that it was a matter of surprise to him that there was such uniformity of opinion upon the subject of tuberculosis. Five or six years ago nearly all held different opinions from those already enunciated, and believed that miliary tubercle was a separate and distinct disease from caseous pneumonia, or the catarrhal phthisis of Niemeyer. But, as Dr. Welch had observed, the results of clinical study and histological work had been such as to unite in declaring that the diseases heretofore known as phthisis and tuberculosis were one and the same. One important point developed was that it seemed to be the unanimous opinion of those gentlemen who might be classed as having taken the histological side of the question that tubercle is an inflammatory product. With reference to the question whether phthisis is always tuberculosis he thought that possibly he should not take quite so strong ground as had been taken by Dr. Welch; he did not feel quite sure that phthisis was always tubercular. He then referred to a form of pneumonia which he had not had an opportunity to study, but which occurs in the colored race, and which goes on to caseous change without being associated with tubercle. Although he had not had the opportunity to study such cases, he had been told by competent observers that this form of pneumonia existed in the colored race, and that it was especially liable to be followed by phthisis. The reason why it had been held that tuberculosis and phthisis were the same was that the results had been obtained from post-mortem examinations. They were not found in every instance, but in the majority of cases they were present when they were looked for. Niemeyer had put us all astray by making certain statements which were not true, and claiming that tubercle was always preceded by caseous pneumonia or by some deposit of caseous matter in the body. These two points were incorrect, because miliary tuberculosis was found without pneumonia, and in other cases the most careful search for caseous deposits at some other part of the body did not reveal a single one. It was an absolute fact that such cases were found, perhaps not very frequent, but sufficient in number to prove that Niemeyer's position was incorrect.

With reference to scrofula and tubercle, it was interesting to notice that with the advancements which had been made in the study of tubercle corresponding advancements had also been made in the study of scrofula. In other words, what we used to call scrofulous disease of the glands was now classed under the head of tuberculous changes. He thought it was not improbable that we should class those sluggish forms of disease in which lymphatic glands became enlarged, bones became involved, and also inflammations of mucous membranes and skin manifested themselves as belonging to certain forms of tubercle. Doubtless whooping-cough and measles developed conditions which invited tuberculosis or phthisis, and he thought that they must be placed as forerunners of phthisis, both in cases in which there was an hereditary tendency and an acquired disposition to pulmonary disease.

With reference to heredity, statistics from hospitals for consumptives had shown that sixty per cent. of cases of phthisis could be referred to hereditary predisposition. In a less number of cases the disease had been traced to an acquired predisposition. He thought that the direct influence of contagion must be slight in comparison with hereditary taint. That an hereditary taint was necessary had been assumed by Koch, who said that a predisposition to phthisis must exist, else the parasite does not take root. With reference to contagion it was quite probable that there was a certain degree of danger as it seemed to have occurred in about thirty-two per cent. of the cases. It was well to know this, for those who argued in favor of contagion also argued that the disease was preventable by certain measures, as for example, isolation of the patient and disinfection of the sputa, so that after all the question of contagion was quite subordinate.

SECTION IN PRACTICE.

Stated Meeting, October 17, 1882.

Andrew H. Smith, M.D., in the Chair.

ORTHOPÆDIC NEUROSES.

Dr. V. P. Gibney reported cases to which he gave the above name. They were special in character, and characterized mainly by marked deformity. For example, the lower extremities of one patient were folded and fixed in the position assumed by a tailor when seated upon his bench, and had been supposed to be the result of spinal caries. Spinal irritation was the term by which they were more commonly known, and in all the cases relief, prompt and apparently permanent, followed the use of counter-irritants and poultices.

Dr. Janeway referred to cases which might have some bearing upon certain obscure cases in which contractures and paralysis of the extremities were developed. One patient whom he saw was suffering from well-marked symptoms of cerebro-spinal meningitis. Close inquiry elicited the fact that the boy had received a kick upon the sacrum some time previously, and that his legs had been stiff preceding the development of diffused meningitis. As a cause for the peripheral trouble, it was expected that some lesions low down would be found, and at the autopsy a lesion was revealed that had attacked primarily the contents of the sacral canal. Had he not known of the injury, probably that part of the body would not have been examined, nor would the changes in the muscles have been especially noticed, but the case doubtless would have been regarded as one of ordinary cerebro-spinal meningitis limited to the base of the brain and upper part of the spinal cord.

In addition to the perimeningitis in the sacral region there was a spot of carious bone corresponding to the place where the boy was kicked. Besides, the perimeningitis had produced pus outside of the dura mater in the course of the nerves given off in that region. This case illustrated the fact that sometimes, as the result of injury, inflammatory disturbances were developed around the nerves, and so might explain certain obscure phenomena the cause of which could not be reached in the milder cases where recovery took place.

Dr. L. Weber said that he had seen many cases of simulated hip-joint disease, similar in character to those reported by Dr. Gibney, and in all recovery had taken place in a comparatively short time. He thought the term "orthopædic neuroses" was not quite satisfactory, because it would probably lead to the inference that the writer referred to disturbances following the use of orthopædic apparatus.

He thought the terms "nervous coxalgia" and "spinal irritation" were generally understood and perhaps might as well be retained.

Dr. Gibney was not strenuous with reference to retaining the term, and accepted the suggestion that it might, perhaps, lead to confusion.

Dr. E. C. Seguin then read a paper on

MYELITIS FOLLOWING INTOXICATION BY PARIS GREEN (ARSENICAL PARALYSIS).

In none of the books on nervous diseases had he found reference to paralysis following acute intoxication with arsenic. Turning to other departments, however, he had found that arsenical paralysis was noticed as early as the thirteenth century, and that from time to time attention had been directed to it by different writers, but most extensively by Leroy d'Etiolle, of France.

A brief outline of several cases was given, together with the detailed clinical history of those cases that had come under his own observation. He believed that they were reflex in character, and that the myelitis was due to inflammatory action upon the nerves of viscera.

Dr. Janeway had seen three cases, two in which there was paraplegia following the ingestion of Paris green for suicidal purposes, and one in which there was paralysis of the arms as well as of the legs. In the last case he reached the conclusion that the patient had polio-myelitis until he learned that he had taken Fowler's solution for chorea, and at one time swallowed a drachm. In that case there was atrophy and descending degeneration. He was of the opinion that arsenic given in excessive doses in the treatment of chorea had produced, in some cases, anterior spinal paralysis with a certain amount of sensory trouble. He thought any one who had read of the spinal symptoms reported in some of the fatal cases of chorea, could hardly fail to be impressed with the similarity which they bore to the effects produced by drugs, and he had no doubt that death, in some of these instances, had been due to toxic influences rather than to the disease itself.

Dr. L. Weber directed attention to cases of chronic arsenical poisoning which he saw at a manufactory in Germany, between 1856 and 1860. The prominent features in the clinical histories were, after working there two, three, or four years, general malnutrition, gastric symptoms not very well marked; some died paraplegic, and dropsy in a large number in the later stages. Some of the workmen had phthisis, whether due to the effect of arsenic or not, he was unable to say. Dr. Weber suggested that the myelitis described by Dr. Seguin was of vaso-motor origin rather than reflex or sympathetic, the primary step being deprivation of the nervous centre of blood-supply, and second an inflammatory process produced in a manner not unlike that which follows obstruction of blood-vessels from embolism.

Dr. Putzel said that two years ago he published a case of subacute myelitis due to arsenical poisoning. Within two weeks after the poisonous quantity of arsenic had been taken well-marked symptoms of myelitis developed. The patient made a complete recovery within a few months. He had also met with a case of general paralysis, in which the patient was a worker in the dye-works for artificial flowers.

With regard to the theory advanced by Dr. Seguin that the myelitis was due to reflex influences, Dr. Putzel thought that the absence of gastric symptoms in the chronic cases seemed to indicate that it was not due to reflex action.

Dr. J. C. Peters said that some twenty years ago he was concerned in the publication of a book on materia medica, in which were collected cases of poisoning and cases of cure by the use of a single remedy. In the article on arsenic there were fifteen or twenty cases of arsenical paralysis, and of those there were several in which the paralysis was produced by arsenic administered in medicinal doses.

Dr. Birdsall raised the question whether the paralysis in Dr. Putzel's case might not be due to lead instead of arsenic.

Dr. Janeway said he had had occasion to investigate the subject of coloring substances used for such purposes, and found that arsenic was not used; that the green colors commonly ascribed to arsenic were produced in other ways.

Dr. Putzel said that his belief was based upon the statement made by the patient, who told him that arsenic was used, and also that it was not an uncommon occurrence for the workers to get paralyzed. Besides, in his case there was no evidence of lead-poisoning.

Dr. Seguin said that he did not wish to speak dogmatically with regard to the manner in which the myelitis was produced. It had seemed to him that the theory he had given was a rational one, and yet it might be that in the vaso-motor doctrine mentioned by Dr. Weber could be found the more probable explanation.

The point against the reflex origin, raised by Dr. Putzel, was a valuable one in the study of chronic cases, but the paper was on acute arsenical poisoning.

With regard to the possible injury that might be done by the administration of large doses of Fowler's solution in cases of chorea, he had not seen, strictly speaking, nervous symptoms developed by the drug under those circumstances. As to cases of death occurring from acute chorea, so far as his recollection went, he had not known of any in which the patients had been treated with arsenic. Such cases were usually treated with remedies which act promptly, such as chloral, conium, etc. He had not seen a fatal case of chorea in which death could have been attributed to arsenic, and still felt that he should not hesitate to continue to employ the drug in such doses as were at present in common use.

Dr. Janeway thought that the inflammatory process could be explained readily in accordance with Cohnheim's views, namely, that the arsenic acted upon definite vessel tracts, setting up such changes in the wall of the vessel as allowed diapedesis to occur throughout the area over which the injured vessel presided.

Forcing a Recognition of Homœopathy.—The *U. S. Medical Investigator* proposes, as the only way to settle the status of the homœopaths among the regular physicians, that one of their number bring suit against Dr. N. S. Davis, as chairman of the judiciary council of the American Medical Association, for slandering the homœopaths as dogmatists. The suit could be carried, it thinks, to the Supreme Court of the United States and decided. Thus, it thinks, homœopathy would compel its recognition in both ethics and science. It is ready to contribute $5 or $10 toward the expense.

Correspondence.

SPONGE-GRAFTING—A SUCCESSFUL CASE.

To the Editor of The Medical Record.

Sir: Dr. J. D. Hamilton, of Edinburgh, published in *The Edinburgh Medical Journal* for November, 1881, a series of cases in which he had grafted sponge into indolent ulcers and healed them—the sponge becoming organized in the tissues. Dr. Hamilton's method of preparing sponge for grafting is the following: A piece of surgeon's sponge is soaked in dilute nitro-hydrochloric acid, to dissolve all the saliceous and calcareous salts, washed in liquor potassæ until all the acid is removed or neutralized, afterward washed in distilled water, pressed dry, and soaked in a one to twenty solution of carbolic acid and water. When sponge so prepared is thoroughly carbolized it is ready for use. I will not review Dr. Hamilton's cases nor refer to the interesting microscopic studies which he made during the organization of his sponge grafts, but will refer my readers to the original article in *The Edinburgh Medical Journal* of November, 1881.

At the time I read Dr. Hamilton's paper—December, 1881—I had charge of a case of which the following is the history: Mr. M——, of Scranton, twenty-three years of age, consulted me in March, 1881, on account of a swelling on the left side at the junction of the tenth, eleventh, and twelfth ribs and their cartilages. He had severe pleuro-pneumonia in the spring of 1876, from which he did not recover for one year. Since then has been moderately healthy, although he looks white, anæmic. I saw him again in April, and diagnosed abscess, which diagnosis was confirmed by Drs. W. T. Bull and the late Samuel Whitall of New York, whom he consulted about May 1, 1881. On May 11th, fluctuation being distinct, I opened the abscess freely and evacuated about two ounces of thin pus, washed out the cavity, and put in a drainage-tube. The abscess did not heal, and my friend, Dr. P. M. Burke—who kindly took charge of the case for me—made a counter-opening and passed a drainage-tube through. On July 23d we discovered a sinus leading downward and backward from the abscess cavity. The abscess and sinus were then laid open and the bottom packed with oakum and balsam of Peru. Dr. Burke saw the case daily and watched it closely, and I saw it twice a week. About August 10th a point where the pus had begun to burrow was discovered and treated with nitrate of silver and iodoform, but the burrow extended deeper, and was laid open, August 24th, by Dr. Burke. Caustics were of no use in arresting the morbid process, and after this the sinuses were laid open as soon as discovered and filled with oakum and balsam of Peru. During all this time the wounds were kept clean by using a one to twenty solution of carbolic acid. The patient was kept on cod-liver oil, quinine, and iron—iodine was not borne—but grew so weak that it seemed nothing could restore him. He sweated profusely, and for three weeks his temperature varied from 97.5° F. to 106° F. This was in December, 1881. He was now too weak for a cutting operation, although six sinuses existed, and after reading Dr. Hamilton's paper on sponge-grafting, I hastened to give it a trial, for all other measures had failed. I prepared a piece of sponge according to Dr. Hamilton's method, using carbolized oil where he used carbolized water. There were six sinuses, varying in depth from three-fourths of an inch to two and one-half inches, and in breadth from one-twelfth inch to one-half inch.

Two of the shallowest were tried first, the prepared sponge being nicely fitted into the cavities, and a compress of carbolized cotton wool placed over the openings, and secured with a bandage drawn tight enough to exert moderate pressure. One graft had become adherent on the fourth day and the other on the fifth; a slight discharge of pus occurred and was washed away with carbolic acid and water. On the sixth day the grafts bled when pricked, and in three weeks from the introduction of the sponges, the two sinuses were healed firmly, the sponge being organized in the tissues. The other openings were filled with sponge, but in three of the four failure occurred at first trial, owing to the difficulty of fitting the sponge accurately to such long and narrow cavities. The longest sinus two and one-half inches in depth, was grafted three times before union took place. The failures were owing to the irregularity of the cavity, and the difficulty of carrying the sponge to the bottom. In this sinus the cartilage of the eleventh rib was denuded, and the sponge would not adhere to it—this was irritated and healed by granulation when the patient's strength improved. One shallow ulcer, half an inch in diameter, and one-eighth inch in depth, was also grafted with sponge. Here the sponge did not unite nor become organized, but it stimulated the ulcer to healthy action and healed it.

One case is not sufficient from which to draw positive conclusions as to the manner in which sponge-grafts heal wounds or ulcers. Pressure has long been recognized as an important factor in the healing of indolent ulcers, and my observations in the foregoing case lead me to conclude that pressure—moderate elastic pressure with a pure animal porous substance is the first essential in healing an indolent ulcer. Pressure with the sponge in the long narrow sinuses of my patient had the same effect upon the walls of the cavities that Mr. Callender's hyperdistention of abscess has—both stimulate healthy granulation, the difference being that in the latter case a liquid is used which distends temporarily, and is then removed; in the former a semi-solid substance is allowed to remain and exert moderate, equable pressure, and finally to become a part of the tissue. Sponge, from its porosity, is one of the best agents to thoroughly drain wounds, and prevent septic absorption. This action of sponge was noticed more than a century ago by Mr. Charles White of Manchester, in a paper entitled: "An Account of the Successful use of Sponge in the Stoppage of Hemorrhage occasioned by Amputation below the Knee, and the Remarkable Effects of that Application in Preventing the Absorption of Matter." Mr. White concludes his paper with these words: "The sponge keeps down fleshy granulations, partly by a removal of that matter in which they would be soaked, and partly by a compression, the most easy and equal that can possibly be imagined from the natural elasticity of the sponge." (See S. Gamgee, London *Lancet*, February, 1882.) In my case the sponge never became foul or broken down when it was fitted closely and carried to the bottom of the sinus. I learned that the outside or surface of the sponge unites with the tissues better and sooner than the cut surface. Mr. M—— is now

as well as he was before the abscess formed, and is performing the duties of a hotel clerk.

I feel confident that sponge prepared as above described will be a valuable agent in healing indolent ulcers. It combines stimulation, pressure, and drainage better than any other substance with which we are acquainted, and these are the essentials in the treatment of indolent ulcers. A case reported by Dr. Norman Porritt, in the *Edinburgh Medical Journal*, May, 1882, shows how useful sponge-grafts are in wounds of the face with considerable loss of tissue. Dr. Porritt grafted sponge into a wound of the face caused by coming in contact with a rapidly revolving wheel which made a wound that could not be covered by the integuments. The sponge united with the tissues leaving a cicatrix *without depression*.

J. BURNETT, M.D.

CARBONDALE, PA.

PLUMBERS AND ZYMOTIC DISEASES.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: I cannot be content to let Dr. Burrall's article on "The Exemption of Plumbers from Zymotic Disease" go before the unsuspecting public without questioning the correctness of his conclusions. They are as follows: "Therefore I would explain the plumber's exemption from zymotic disease while others of the community suffer from it, by the proposition that others are *in a continued exposure during a condition of diminished physical resistance*, while the exposure of the plumber is intermittent and during wakefulness," which being interpreted means that plumbers do not sleep in rooms permeated with sewer-gas, like the rest of us.

Every one recognizes the fact that tailors' children go ragged, and shoemakers' children out at the toes, and many say that ministers' sons and deacons' daughters are no better than the rest of the community.

We all, I think, will acknowledge that our children become ill quite as often and remain ill quite as long as the children of our patients; and those of us who have had it in our way to visit professionally the homes of plumbers, can testify that they are no better plumbed and no better ventilated than the dwellings of their customers; and that their children, though sleeping in the same room with their parents, suffer from zymotic diseases quite as often as other children.

It seems to me that the plumber does not escape zymotic disease by being in league with Satan, as some believe, nor by a wisdom so great that he can free his three rooms from sewer-gas, while the rest of the tenement reeks with poison as others seem to think, but that, if he really does escape, it is by some law of nature as yet not fully known to us.

Yours,

JOHN F. RIDLON, M.D.

102 WEST FIFTY-FOURTH STREET.

DIAGNOSIS OF UTERINE DISEASE BY THE LARYNGOSCOPE.—Dr. Seiler was consulted by a young girl with general relaxation of the mucous membrane of the throat, which he concluded to be due to uterine disease, for which he advised her to put herself under the treatment of her family physician, as local treatment of the throat would be of no use to her. Her reply was, "Doctor, if I had known that you could see all the way down I would not have come to you."—*Maryland Medical Journal.*

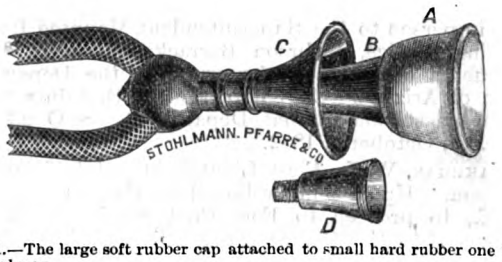
New Instruments.

IMPROVED CAMMANN'S STETHOSCOPE.

BY CHARLES WARE,

NEW YORK.

WILL you allow me, through your paper, to suggest an improvement in Cammann's stethoscope, whereby the large and small cup-shaped pieces are attached together to the rest of the instrument? The small cup only is removed whenever it is desired to use the larger one.



A.—The large soft rubber cap attached to small hard rubber one in usual way.

B.—The small cup is attached to the stethoscope by screwing into the large cup and not by removing the larger one. The calibre of opening is not diminished and is continuous with that of the body of the instrument.

C.—The large cup remains permanently on the instrument.

D.—The small cup, showing the mode of attachment.

The benefit to be gained by this little device is that the *two* cups (large and small) can be conveniently carried with the instrument; one of them is not detached, to be left at home or lost. The advantage of having both cups with the instrument will be apparent to those who have occasion to use it frequently.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 7, 1882, to October 21, 1882.

BARNETT, RICHARD, Captain and Assistant Surgeon. Relieved from duty in Department of the Platte and to report in person to Commanding General Department of the East for assignment. S. O. 237, A. G. O., October 11, 1882.

BIRMINGHAM, H. P., Assistant Surgeon. To proceed to Fort Bayard, New Mexico, when relieved at Fort Elliott, Texas, and report to the Commanding Officer for duty. S. O. 198, Department of the Missouri, October 3, 1882.

BRECHEMIN, LOUIS, Assistant Surgeon. Relieved from duty in Department of Dakota and to report in person to Commanding General Department of the East for assignment. S. O. 237, A. G. O., October 11, 1882.

CRAMPTON, LOUIS W., Captain and Assistant Surgeon. To be relieved from duty in Department of Dakota and to report in person to Commanding General Department of the East for assignment. S. O. 237, A. G. O., October 11, 1882.

EWEN, CLARENCE, Assistant Surgeon. Relieved from duty at Fort Elliott, Texas, to proceed to Fort Gibson, I. T., and report to the Commanding Officer at that post for duty. S. O. 198, Department of the Missouri, October 3, 1882.

CALDWELL, D. G., Captain and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for an extension of three months. S. O. 105, Department of the Platte, October 3, 1882.

GRAY, W. W., First Lieutenant and Assistant Surgeon. To be relieved from duty in the Department of the Columbia and to report in person to Commanding General Department of the South for assignment. S. O. 237, A. G. O., October 11, 1882.

KANE, JOHN J., Assistant Surgeon. Granted leave of absence for one month, with permission to apply for extension of three months. S. O. 202, Department of Missouri, October 9, 1882.

MCCREERY, GEORGE, Assistant Surgeon. To report in person to the Superintendent Mounted Recruiting Service, Jefferson Barracks, Missouri, to conduct a detachment of recruits to the Department of Arizona. On completion of that duty to rejoin his station in that Department. S. O. 233, A. G. O., October 6, 1882.

WAKEMAN, W. J., First Lieutenant and Assistant Surgeon. Upon being relieved at Fort Douglas, U. T., to proceed to Fort Fred Steele, W. T., and report to the Commanding Officer at that post for duty in the absence of Assistant Surgeon D. G. Caldwell, on leave of absence. S. O. 106, Department of the Platte, October 6, 1882.

WATERS, W. E., Surgeon. Ordered to Madison Barracks, New York, for duty as Post Surgeon. S. O. 178, Department of the East, October 5, 1882.

WOODWARD, J. J., Major and Surgeon. Leave of absence extended four months on account of sickness. S. O. 233, A. G. O., October 6, 1882.

MOORE, JOHN, Major and Surgeon, Medical Director, Headquarters Department of the Columbia. Granted leave of absence for one month, with permission to apply to Headquarters Military Division of the Pacific for extension of one month. S. O. 145, Department of the Columbia, October 3, 1882.

LORING, LEONARD Y., Captain and Assistant Surgeon. Granted leave of absence for four months. S. O. 243, A. G. O., October 18, 1882.

EVERTS, EDWARD, Assistant Surgeon. Assigned to duty at Fort Cœur d'Alene, I. T. S. O. 145, Department of the Columbia, October 3, 1882.

CARTER, EDWARD C., Assistant Surgeon, now at Camp Price, to proceed to Fort Thomas and report to the Commanding Officer of that post for duty. S. O. 159, Department of Arizona, October 11, 1882.

TAYLOR, A. W., Assistant Surgeon. Relieved from duty at Fort Supply, I. T., and assigned to duty at Fort Cummings, N. M. S. O. 208, Department of the Missouri, October 16, 1882.

BYRNE, CHARLES B., Captain and Assistant Surgeon. Leave of absence extended ten days. S. O. 243, A. G. O., October 18, 1882.

APPEL, A. H., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month. S. O. 168, Department of Dakota, October 14, 1882.

BUSHNELL, GEORGE E., First Lieutenant and Assistant Surgeon. Leave of absence extended one month. S. O. 244, A. G. O., October 19, 1882.

WILLIAMS, JOHN W., Surgeon. To proceed to Vancouver Barracks, W. T., and report upon arrival to the Commanding General, Department of the Columbia, for assignment to duty in that department. S. O. 168, Military Division of the Pacific, October 13, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 21, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Oct. 14, 1882.	0	32	24	2	8	32	1	0
Oct. 21, 1882.	0	44	33	3	9	40	0	0

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK. — At the Annual Meeting held October 23, 1882, the following were elected officers for the ensuing year. *For President*, David Webster; *For Vice-President*, Andrew H. Smith; *For Secretary*, Wesley M. Carpenter; *For Assistant Secretary*, Charles H. Avery; *For Treasurer*, Orlando B. Douglas; *For Censors*, F. R. Sturgis, Daniel Lewis, W. R. Gillette, J. D. Bryant, H. B. Conrad. *For Delegates to the Medical Society of the State of New York*, J. W. Howe, F. P. Foster, E. Gruening, D. Lewis, A. Gerster, R. M. Fuller, J. S. Warren, A. V. B. Lockrow, W. F. Mittendorf, D. Webster, C. L. Dana, A. H. Smith, J. H. Ripley, S. Sexton, P. F. Mundé, C. S. Bull, E. L. Partridge, W. M. Carpenter, L. Johnson, V. P. Gibney, O. D. Pomeroy, A. Hadden, W. T. Alexander, G. B. Fowler.

THE MARINE HOSPITAL SERVICE.—The annual report of Surgeon-General Hamilton has just been made. From it we learn that 36,184 patients were treated during the year 1881-2, an increase of 3,571 over the previous year. Of these, 13,048 were treated in hospitals. Dr. Hamilton urges the necessity of new hospitals at Savannah and Norfolk, also of a home for decrepit seamen.

During the past year the operations of the service have been extended to a number of new ports. There were 2,090 pilots and 273 seamen examined for color-blindness. Sixty-three of the former (about three per cent.) and four of the latter were found color-blind.

The following are the recent changes in the service: Surgeon Hatton has been ordered to Louisville, Ky., to relieve Surgeon W. H. Long, who is transferred to Detroit, Mich. Dr. L. Gibson of Arkansas has been appointed an Acting Assistant Surgeon at Little Rock, Ark.

CONCERNING THE CHECKING OF PULMONARY HEMORRHAGE.—Dr. A. C. Post writes: "In a recent number of THE RECORD is an article entitled 'A Simple Means of Checking Pulmonary Hemorrhage with Shawl-straps.' For more than thirty years I have been in the habit of arresting internal hemorrhages by bandaging the arms and thighs so as to shut off from the general circulation a very considerable portion of blood in the veins of the extremities. From the time of my connection with the Medical Department of the University of the City of New York I have strongly recommended the practice in my lectures. The practice did not originate with myself, but I cannot refer to the source from which I ob-

tained it. The use of shawl-straps to compress the veins, as advocated by Dr. Curtis in the article referred to, is a convenient mode of accomplishing the object.

"P. S.—On page 418, near middle of second column, occurs the expression 'nearly two drachms (75 centigrammes).' I suppose that the writer meant to say 750 centigrammes."

THE LATE DR. J. W. S. CLEMENTS.—At a meeting of the Board of Surgeons of the Police Department of the City of New York it was resolved that a suitable minute be prepared on the death of Dr. J. W. S. Clements. The following was unanimously adopted:

Resolved, That his long connection with the medical profession of New York, his extensive and varied experience as a practitioner, his indomitable perseverance in the discharge of duty even when suffering from the effects of disease and the infirmities of advancing years, and his excellent private character commend him as a man worthy of our kindly regard.

It is therefore directed that this minute be placed on record and published in THE MEDICAL RECORD, and a copy transmitted to his family, with the assurance that his colleagues in the Board of Surgeons extend to them their sincere sympathy, and unite with them in their sorrow and regret.

THE AMERICAN ACADEMY OF MEDICINE held its seventh annual meeting in Philadelphia, on the 26th instant.

ENLARGEMENT OF ST. VINCENT'S HOSPITAL.—A very successful fair was held under the auspices of the Sisters of Charity during the past week, for the benefit of St. Vincent's Hospital. The money obtained is to be used for enlarging the building. The addition is to have fifty feet frontage, with two wings eighty-two and a half feet in length. It will have accommodations for eighty beds, in three stories of wards.

RESIGNATION OF DR. HOLMES.—It is reported that Dr. O. W. Holmes, Professor of Anatomy in the Harvard Medical School, has resigned.

THE NEXT INTERNATIONAL CONGRESS OF HYGIENE will meet at Haag, in January, 1884.

DAMAGES FOR INJURIES brought about by drinking impure water have been obtained by a lawyer in England, from the town in which he resided. The sum awarded him was $10,000. Such cases furnish a practical stimulus to sanitary science.

DIPHTHERIA IS A DISEASE OF THE LIVER, according to Dr. Reiter (Squibb's *Ephemeris*). The liver does not destroy fibrin as it normally should. Dr. R. cures all cases by giving calomel in a scruple dose, followed by ten-grain doses every hour.

THE MUCH TALKED OF ARTIFICIAL QUININE made by M. Maumene has been tested by M. Combe for the Paris Academy of Medicine. He finds that the substance made according to M. Maumene's directions is not quinine at all.

THE ANNUAL MEETING OF THE SOCIETY OF GERMAN PSYCHIATRISTS was held at Eisenach September 15th and 16th.

THE GARLICKY ODOR IN THE BREATH PRODUCED BY BISMUTH is not due, says Squibb, to either arsenic or tellurium, and its cause is as yet unknown.

THE PATHOLOGICAL SOCIETY of Philadelphia has offered a prize of fifty dollars for the best original paper, based upon pathological investigation, read during the winter by a member who is a hospital resident.

FREQUENCY OF GONORRHŒA.—A correspondent of *The Lancet* finds, by reference to notes and inquiries among other medical men, that seventy five per cent. of adult males have had gonorrhœa once; forty per cent. twice; fifteen per cent. three or more times; yet no two medical men treat the disease in the same way.

DR. HOLMES ON PHYSICAL DIAGNOSIS AND SPECIALISM.—I have often felt, when seeing hospital patients worried by hammering and long listening to their breathing, in order that the physician might map out nicely the diseased territory, the boundaries of which he could not alter, as if it was too much like the indulgence of an idle and worse than idle curiosity. A confessor may ask too many questions; it may be feared that he has sometimes suggested to innocent young creatures what they would never have thought of otherwise. I even doubt whether it is always worth while to auscult and percuss a suspected patient. Nature is not unkind in concealing the fact of organic disease for a certain time. What is the great secret of the success of every form of quackery? *Hope kept alive.* What is the too fatal gift of science? *A prognosis of despair.* "Do not probe the wound too curiously," says Samuel Sharp, the famous surgeon of the last century. I believe a wise man sometimes carefully worries out the precise organic condition of a patient's chest when a *very* wise man would let it alone and treat the constitutional symptoms. The well-being of a patient may be endangered by the pedantic fooleries of a specialist.—*Boston Medical and Surgical Journal.*

A POISON FOR THE BACILLI OF TUBERCLE.—A paper has been recently communicated by M. de Korab to the Paris Academie des Sciences on the action of a substance called *helenine* upon the bacilli of tubercle. He cultivated the *bacilli* according to Koch's method, in bovine serum, which was daily heated for a week, in order to sterilize it. Tubercles from a guinea-pig were then introduced into ten tubes, to three of which the helenine was added. All were kept at a temperature of 37° C. for a week. It was then found that the tubes having no helenine caused tuberculosis when inoculated. Those containing the helenine were innocuous. Some glowing inferences are drawn by M. de Korab from his experiments.

THE FIFTY-FIFTH ANNUAL MEETING OF GERMAN NATURALISTS AND MEDICAL MEN was held at Eisenach during the week ending September 24th.

Of the general addresses, the most notable was that by Professor Ernest Haeckel on Darwin, Goethe, and Lamarck.

There were several medical sections, but the papers read were not very numerous.

The Association will meet next year at Fribourg.

JOURNAL OF CUTANEOUS AND VENEREAL DISEASES.—We have received the first number of this journal. It is edited by Drs. H. G. Piffard and P. A. Morrow, and is published monthly. It contains an excellent colored lithograph of a case of trichophytosis cruris, several original articles, reviews, selections, and items. Altogether the *Journal* is excellent, and shows judicious editorship.

BRAIN WEIGHT AND BRAIN POWER.—Surgeon-Major J. P. H. Boileau reports in *The Lancet* a case of a man of very active and vigorous intellect who died at Metley recently. The brain weighed 59.72 ounces. This exceeds others usually quoted, except Cuvier's (64½ ounces) and Abercrombie's (63 ounces). The specific gravity was also very high, 1.049, the specific gravity of the average brain being 1.036.

"THE PHYSICIAN HIMSELF"—D. W. Cathell, M.D., of Baltimore, Md.—has advanced to the second edition, which is enlarged, rearranged, and divided into chapters. We reiterate our good opinion of the work. It is published by Cushings & Bailey, Baltimore, Md.

THE YELLOW FEVER EPIDEMIC.—The daily number of new cases at Pensacola, Fla., has decreased, being at date of writing from 30 to 40. On October 22d, there were 37 new cases reported, and 1 death. This makes a total of 2,007 cases, and 163 deaths.

The fever has nearly disappeared from Texas.

THE CARTWRIGHT LECTURES.—Dr. W. T. Belfield, Lecturer on Physiology in Rush Medical College, will deliver the Cartwright course of lectures in New York the coming winter. He will probably choose for his subject the recent investigations in disease-germs.

PROFESSOR PAUL VOGT succeeds the late Professor Hueter as Professor of Surgery at Greifswald.

DR. SONNENBURG has been appointed Bergmann's successor at Würzberg, Bergmann having taken Langenbeck's chair at Berlin.

THE DEATH OF MR. J. T. CLOVER, F.R.C.S., is announced. His name is connected with improvement in the mode of administering anæsthetics and with a special inhaler devised by himself.

THE PROVINCIAL BOARD OF HEALTH OF ONTARIO has sent us a specimen of its weekly bulletins. This is accompanied with a colored chart and various diagrams which show at a glance the meteorological and health conditions of the province. The bulletin is quite superior to the average of this form of literature.

THE USE OF THE CONDOM IN GONORRHŒA is recommended by Dr. C. H. Chalkley (*Southern Clinic*), instead of the ordinary bandage. He covers the glans with a thin layer of disinfectant cotton and then draws the condom over it.

A CASE OF TYPHOID FEVER AT SEVENTY-TWO YEARS OF AGE is reported by Dr. Charles H. Miller in the *Southern Clinic*. Dr. Miller states that no other case in a person so old has before been reported. The maximum generally given is fifty to fifty-five years. The details of the case, however, are not given with sufficient care to prove that it is the disease claimed. The patient recovered.

THE MAJORITY OF THE CHEAP CIGARETTES contain more nicotine in proportion to the tobacco in them than does an ordinary cigar; one reason for this being that many of them are made from cigar-stumps, which are carefully collected for this purpose, and these cigar-stumps are saturated with nicotine distilled into them by the slow combustion of the cigar.

ASSOCIATION JOURNALS.—Dr. J. Milner Fothergill writes a long letter to the *Medical Times*, giving an account of the *British Medical Journal* and of the dissatisfaction at its management. The writer volunteers much advice to our American Medical Association. His chief complaint against the organ of the British Association seems to be that its editor has advocated the compulsory notification of infectious diseases. He does not make out a very strong case, though he writes a long letter. Dr. Fothergill will have to beware, or he will be accused of having become intoxicated with the exuberance of his own picturesque rhetoric.

THE TROUBLES IN LUNATIC ASYLUM MANAGEMENT.—Much scandal has been aroused over the management of the Central Lunatic Asylum at Anchorage, Ky. It was charged that a system of "ducking" has been used, with fatal results in some cases. A judicial investigation has resulted in bringing indictments against several employees. It was shown that obsolete methods of treatment were employed.

THE LATE DR. J. FOSTER JENKINS, OF YONKERS, N. Y.—The following resolutions were passed by the Yonkers Medical Association, N. Y.: *Whereas*, It has pleased Almighty God in his mysterious providence to remove from our midst, by death, our much esteemed and beloved member, Dr. J. Foster Jenkins; and, *Whereas*, We, the members of the Yonkers Medical Association, have by his removal lost a faithful and regular attendant upon our meetings; one who was always ready to do his part, contributing largely to the scientific interest, and by his eminent ability and peculiar qualifications as a physician and man he gave to the meetings a superior tone and dignity; *Resolved*, That we shall ever remember him as one whose upright character, pure example, and blameless life is worthy of our highest admiration and profound respect. *Resolved*, That we tender to the family and friends of our departed brother our heartfelt sympathy in the dark hour of their affliction. *Resolved*, That we attend in a body the funeral of Dr. Jenkins from his late residence. *Resolved*, That a copy of these resolutions be sent to the family of deceased, and also published in THE MEDICAL RECORD and local papers.

DR. VALENTINE BROWNE, *President.*
N. A. WARREN, M.D., *Secretary.*

DR. CARL KROG.—At a late meeting of the Medico-Chirurgical Society of German Physicians the following preamble and resolution were adopted:

Whereas, After a long and painful illness death has ended the sufferings of our beloved president, Dr. Carl Krog; and *Whereas*, During his long period of membership he manifested a deep interest in our society, and latterly as its president left nothing undone that could promote its welfare; and *Whereas*, His qualities both as man and colleague called forth our admiration, as did his patience in long suffering command the sympathy of all who knew him; therefore be it

Resolved, That the members of the Medico-Chirurgical Society of German Physicians transmit to the bereaved family the expression of their deep grief at the loss of their old friend and the assurance that the society, for whose growth and development he did so much, will ever treasure his memory in honor and esteem.

A POSITIVE HOMŒOPATH.—Dr. Samuel A. Jones, a very pronounced homœopath, writes to the *New York Medical Times* concerning the recent doubts expressed as to the value of high dilutions. He adds with much calmness that "all hell plus a great gross of Milwaukee tests" can never knock out of him a somewhat learned from a certain experience.

Original Communications.

ON THE USE OF THE OIL OF WINTERGREEN AS AN EFFICIENT SALICYLATE IN ACUTE RHEUMATISM.

By FRANCIS P. KINNICUTT, M.D.,

PHYSICIAN TO ST. LUKE'S HOSPITAL, TO THE OUT-PATIENT DEPARTMENT OF THE NEW YORK HOSPITAL, ETC.

In a paragraph of a few lines in the January number (1882) of the *Ephemeris of Materia Medica, Pharmacy and Therapeutics*, reference is made to the use of the oil of wintergreen, as an efficient salicylate in acute rheumatism. Mr. P. Cassamajor, a well-known chemist of Brooklyn, it is stated, arguing from a purely chemical position, was led to expect better results from the use of this oil (which is mainly a methyl salicylate), in rheumatic affections, than from other salicylates of a more fixed character. Carrying out his ideas, he treated himself and several friends suffering from acute rheumatism with ten-drop doses of the oil, frequently repeated. The results were very satisfactory. The method seemed to me worthy of an extended and careful trial. I therefore directed that all cases of acute rheumatism received in my wards at St. Luke's Hospital, during the months of May, June, and July of the present year, should be placed upon this treatment.

Before stating the results obtained, it will be useful to briefly consider the properties of this essential oil. The oil of gaultheria, or wintergreen, contains 90 per cent. of the methyl ether of salicylic acid, and 10 per cent. of a terebene, separable by fractional distillation. It mixes in all proportions with alcohol and ether, and is slightly soluble in water. When taken internally, it is speedily absorbed into the blood, and is excreted *mainly* by the kidneys, imparting to the urine its characteristic odor.[2]

Its elimination is very rapid; the presence of a salicyl compound has been readily detected by me, by the ferric chloride test, in the urine passed one hour after the administration of twenty drops of the oil. Its antiseptic properties are very marked. One part of the oil to two hundred of urine preserves the latter for eighteen days. "Urine voided one hour after taking twenty drops of the oil remained perfectly free from decomposition for twelve days, while urine passed immediately before its administration became putrid and ammoniacal in the usual time."[3]

The cases, the details of which I shall present to you, were very carefully observed by me from the time of their reception into the wards. They were all well-marked cases of acute rheumatism, several of them of a severe type. The method adopted in the earlier cases was to administer the oil in ten-minim doses every two hours, daily, until eight doses had been taken. Its use being unattended with any gastric disturbance or toxic effects, the daily amount was gradually increased, until in the later cases fifteen-minim doses were given every two hours, except during sleep, and in severe cases during the twenty-four hours. The mode of administration varied according to the individual taste of the patient, and consisted in floating the oil on water (a wine-glass or more), on milk, saturating lumps of sugar with it, and finally in giving the oil in capsules incorporated with a little carbonate of magnesia.[1]

It was found that the patients took the drug very willingly, many expressing a decided liking for it. In none of the cases were the occasional toxic effects (viz., disturbed or perverted vision, delirium, etc.), of the acid observed; ringing in the ears, the symptom of the full physiological effect of other salicyl compounds, was of infrequent occurrence. In only one case was the slightest gastric disturbance excited, and in this instance consisted in a single rejection of the medicine.

Cases of *acute* rheumatism are alone included in the following table. The oil of wintergreen was, however, employed in my wards during the same period in a number of cases of a sub-acute character, also in a single mixed case of gout and rheumatism (with marked benefit), and in other affections in which the salicyl compounds have been employed with more or less benefit, with results corresponding in all respects with those obtained from the latter.

TOTAL NUMBER OF CASES TREATED WITH OIL OF WINTERGREEN, 12.[2]

Number of case.	Maximum temperature, first day.	Temperature normal.	Complete freedom from pain.	Pericarditis, endocardial murmurs.	Relapses.	Stay in hospital.
1	103⅜° F.	4th day.	4th day.	Fourth day, faint systolic apex bruit.	0	23 days.
2	99⅘ "	1st "	5th "	0	0	19 "
3	100⅖ "	4th "	6th "	0	0	16 "
4	101⅖ "	2d "	5th "	0	Pyrexia and joint pains, 15th day.	29 "
5	100 "	4th "	6th "	Faint systolic apex bruit on admission.	0	18 "
6	100⅘ "	4th "	6th "	0	Pleuritis and phlebitis, 11th day.	50 "
7	100 "	4th "	4th "	0	0	27 "
8	103⅕ "	3d "	3d "	Distinct systolic apex bruit on admission.	0	20 "
9	102⅕ "	4th "	4th "	0	0	15 "
10	99 "	1st "	4th "	0	0	18 "
11	102 "	3d "	4th "	Ninth day, systolic apex bruit.	0	22 "
12	103 "	3d "	3d "	30th day, systolic apex bruit.	Pyrexia and joint pains, 14th and 29th day.	35 "

Average duration of pyrexia, 8-12/12 days.
Average duration of joint pains, 4¼ days.
Average duration of stay in hospital, 24¼ days.

The mistake of reducing the daily amount of the medicine at too early a date and in not confining the patient in bed for a sufficient period, accident-

[1] Read before the Practitioner's Society of New York, October, 1882.

[2] A portion of the methyl salicylate is certainly eliminated by the kidneys unchanged; I have been unable to assure myself that it is *wholly* so eliminated.

[3] Glasgow Medical Journal, July, 1882, p. 66.

[1] Fifteen or twenty drops of the oil in two ounces of water, the mixture being thoroughly shaken before use, constitutes a simple and very agreeable mode of administration.

[2] The total number treated was really seventeen. The results in the remaining five cases correspond very closely with those given in the table; they are not included, from the fact that the temperature-charts were very carelessly lost in the transference of the patients to another ward, during temporary repairs to the hospital.

ally was made in one or two instances.[1] This error, I believe to be a very common one and encouraged by the very rapid subsidence of the pyrexia and arthritic pains under full doses of any of the salicyl compounds. I would add a word in regard to the advantage to be derived, in my estimation, from the method of giving the salicylates in *frequently repeated* doses. As a rule, salicyl compounds are rapidly eliminated and the effects of comparatively temporary duration.[2] The maximum benefit to be obtained from them in acute rheumatism will therefore be found, I believe, in conforming the dosage to the rate of elimination of the drug, in so far as is possible.

Although my intention has been simply to compare the efficiency of the methyl salicylate with other salicyl compounds, in the treatment of acute rheumatism, a careful study of the cases recorded is not devoid of interest.

Duration of Pyrexia.—The efficiency of the methyl salicylate in controlling the pyrexia would seem to be slightly more marked than in ameliorating the joint pains, judged by the duration of each of these symptoms; a result which corresponds with Dr. Sydney Coupland's observations in regard to other salicyl compounds.[3]

Pericarditis, endocardial murmurs.—Pericarditis was developed in none of the cases. In Case 1 the systolic apex bruit was very faint, heard only over the mitral area, and disappeared during convalescence. In Case 5 the bruit was also faint and not transmitted. In Case 8 a distinct systolic apex murmur, transmitted, was present on admission. In Case 11 there was a roughening of the first sound over the aorta and pulmonary areas on admission, and on the ninth day a faint systolic apex bruit, heard only over the mitral area, was detected. In Case 12 a systolic apex bruit, not transmitted, was developed only on the thirtieth day. The pathology of many systolic apex murmurs in rheumatism is at least a debatable question. In the cases recorded, with the exception of No. 8, I was disposed to believe that they were due to the anæmia associated with the disease, possibly in Cases 11 and 12 to the conjectural anæmia produced by the salicyl compounds.

Relapses.—In the three cases in which relapses occurred, pyrexia and joint-pains were both present, an association which is by no means constant in relapses of the disease.

In Case 4 the patient by mistake was permitted to be out of bed at an earlier date than was intended, and on the sixth day the daily amount of oil was diminished to one drachm. During a violent northeast storm, on the fifteenth day, a relapse occurred. The duration of the pyrexia of the relapse was three days; of the joint-pains six days.

Case 6, although classed among the relapses in the table, is more properly illustrative, I believe, of the efficiency of the salicyl compounds in controlling the pyrexia and arthritic pains of acute rheumatism without necessarily destroying the rheumatic virus.

With the daily administration of two drachms of the oil, the pyrexia and joint-pains disappeared on the fourth and sixth days respectively. Although the drug was given continuously in similar doses, a pleuritis and femoral phlebitis were developed on the eleventh day, but without further arthritic symptoms. In Case 12 a relapse occurred on the fourteenth day, the dosage having been gradually diminished from the ninth day. The duration of the pyrexia was three days, of the joint-pains seven days. A second relapse, lasting only twenty-four hours, occurred on the twenty-ninth day, the medicine having been discontinued on the twenty-seventh day, and salicin in gr. xv. t.i.d. substituted, partially for its tonic effect. The occasional inefficiency of the methyl salicylate, *given in full doses, and where all other precautions are carefully observed*, in preventing the occurrence of relapses, corresponds with the experience of other observers and with my own in the use of other salicyl compounds.

Duration of stay in hospital.—The rule adopted in my service is to discharge convalescents from acute rheumatism only after a period of a full week or ten days of their being about the wards and on full diet. In Dr. Francis Warner's[1] analysis of 352 cases of rheumatism treated by salicyl compounds in the London hospitals, the average time in hospital was 34.9 days. In Dr. Sidney Coupland's[2] statistics of 317 cases similarly treated, the average time in hospital was 31.4 days. The average duration of stay in hospital in the 12 cases treated with the methyl salicylate was 24½ days.

CONCLUSIONS.

First.—That in the oil of wintergreen we possess a most efficient salicylate in the treatment of acute rheumatism.

Second.—That in its efficiency in controlling the pyrexia, the joint-pains, and the disease it *at least* ranks with any of the salicyl compounds.

Third.—That the best method of its administration is in frequently repeated doses, continued in diminished doses throughout convalescence.

Fourth.—That its use possesses the advantages of being unattended with the occasional toxic effects, the frequent gastric disturbance produced by the acid or its sodium salt, even when prepared from the oil of wintergreen; that its agreeable taste and finally its comparative cheapness are further recommendations in favor of its employment.

I cannot conclude without expressing my obligations to the members of the resident staff, Drs. Campbell, Moffat, Remsen, and Devlin, for their valuable assistance in the above observations.

[1] The rule adopted in my wards in the treatment of acute rheumatism with the salicyl compounds has been to continue them in diminished doses throughout convalescence.

[2] The continued presence of a salicylic compound in the urine after the discontinuance of the drug, as observed in a case reported by Dr. Habershon, and in several of Dr. Coupland's, should be regarded, I believe, as instances of an individual and exceptional retarded elimination.

[3] Lancet, January 7, 1882.

[1] Lancet, December 24, 1881.

[2] Ibid., January 7, 1882.

ELECTRO-CAUTERY IN EYE DISEASES.—Electro-cautery is being used extensively in Paris in various affections of the eye, I might almost say promiscuously. It is used in entropion, extropion, pannus, leucoma, ulcers of cornea, scleritis, anterior staphyloma, conical cornea, and detachment of the retina. It is exceedingly difficult, as every one knows, to ascertain the relative value to be attached to these operations in cases thus seen. The one advantage in many cases seems to be that it takes only a very little time to complete the operation, an advantage not always on the side of the patient.

In detachment of the retina M. De Wecker is using electro-cautery two rows of points in the lower cul-de-sac—so, : : : : : : : .—*Cor. Chicago Medical Journal and Examiner.*

OBSCURE CASES OF INEBRIETY.

By T. D. CROTHERS, M.D.,
HARTFORD, CONN.]

In all etiological studies of inebriety, there are certain cases whose physiological history is involved in mystery. The first use of spirits was obscure, and grew so gradually that it escaped all notice. Such cases have drank spirits for a long time, without any intelligent comprehension of the reasons or nature of the act. When in the later stages attention is called to them, the theory of vice and sin is urged vehemently, on the supposition that any other view would take away personal responsibility and personal effort to recover. The delusion of strength to stop at will, so common in all of these cases, is stimulated by this theory, and the method of prayer and pledge is readily adopted. Henceforth they are alternately buoyed up on this delusion of self-control and help from the pledge and prayer, or depressed with the utter hopelessness of all means. Any vague impression which they may have of a physical causation has no support from others, hence all physical inquiry is ignored. The old divine, Thomas Aquinus, in the twelfth century describes the sin of inebriety as follows: "The whole life of a drunkard is a battle-ground in which the flesh and the spirit are contending for the mastery. Sometimes the drunkard is on the side of the flesh, then he joins the spirit, and the conflict goes on, either embracing the devil or casting him off. But the devil triumphs at last in most cases." This is the theory, slightly varied, urged to-day in explanation of many cases whose origin is not clear. In all ages of the world, the mysterious and that which could not be explained has been attributed to a spiritual origin. Hence inebriety has been referred to a low moral nature, and to vice and sin. When from a better knowledge this theory was untenable, a compromise was made, and now it is urged that a stage of vice and sin is followed by disease. Or in other words, the inebriate is always vicious and sinful at first, and the result of gratifying this low moral nature is disease. This pernicious doctrine has put back the scientific study of inebriety for half a century. It is the obscure border-land cases whose mystery has attracted clergymen and reformers that have furnished support for these false theories. The presumption of the advocates of this doctrine, who insist on the vice origin of all cases, whose chain of causes are not clear, is misleading and unnatural. If in ten cases of a similar disease the physical origin can be traced in five, it is most reasonable to suppose that a similar physical causation exists in the others, although not clearly traceable. Can any one doubt the physical origin of typhoid fever, insanity, or any other disease long known, simply because the causation in some cases is obscure? Inebriety is a more complex disease than insanity, and has never been studied thoroughly, but the natural history of some cases, starting from a well defined physical standpoint, passing over a regular course which can be traced from stage to stage, furnishes the best of evidence of physical causation and physical law, which a wider knowledge will make clear.

The following case is one in which the causation was clear and traceable: A——, a strong, vigorous merchant, aged thirty, with no heredity and temperate, suffered from a partial sunstroke. He remained greatly debilitated for two months in bed, then began to use spirits to excess, and was a continuous inebriate up to death, four years later. He made great exertions to recover by the pledge and prayer, but failed and died of dementia. The drink craving was clearly traced to the brain injury from sunstroke. No possible causation of vice could be traced to the first use of spirits, and the progress of the case was regular in spite of all means to check it.

The next case is a border-land one, full of mystery, but when carefully studied has clear outlines of an unmistakable physical causation. B——, was born of healthy parents and grew up a vigorous man, temperate and correct in all his habits. He was a prosperous mill owner and attentive to business. At thirty-one years of age he married, and his wife was killed on the wedding tour in an accident. His grief was very profound; for two months he was unable to do any business except to walk to the mill a few moments every day and direct some little matters. He took tonics under the direction of a physician, and complained generally of sleeplessness and poor appetite. A year after he began to frequent low places and use spirits over the bar and associate with bad company. Later he was intoxicated in public. Then he neglected his business, bought fast horses, and became dishonest, doing many things that were foreign to his previous character. Gradually he sank from bad to worse, and finally was sent to State prison for forgery. His property was gone and he became a gambler and inebriate of a low type.

In this case the most prominent symptoms were low, vicious propensities seeking an outlet in bad society and drink. When the history was studied it was clear that the shock of the sudden death of his wife produced a psychical traumatism; some change in the normal functional action of the nerve-centres, which became the starting-point of a general moral and physical degeneration; some loss of nerve-force, manifest clearly in departures from health and changes of thought and action. The sudden shock of grief produced permanent alterations of character. His disposition changed; all his previous motives and ambitions in life vanished. He left the church and began to lead a most irregular life, giving no reason except that he was discouraged. At times he seemed to manifest grief at his conduct and make an effort to recover, but soon relapsed. His brain retained, during the sober moments, an appearance of health in thought and action. He talked and reasoned clearly, and made efforts to recover; signed the pledge; asked the prayers of the church; then, in the moment of greatest promise of success, fell precipitately into the lowest company and state of drinking. There was no reasoning or calculation in this; the mind seemed at a certain point to be incapable of forming any views of the subject, and to act under a diseased impulse that was beyond control. The radical change of character and of motive, beginning at a certain point, leading rapidly to ruin, pointed to a physical cause uninfluenced by any moral state previous to this time.

In the following case a similar obscure history was found from a closer study to spring from the same cause. He was a wealthy merchant who had by long industry amassed a fortune. He was temperate in all things, a man of much character and deliberation, a church member with a family, and very exemplary in conduct and honorable in business. No history of heredity in the family, and no spirits were ever used, partly from principle and an

inherent dislike to their taste and smell. A financial storm made him suddenly poor; his wife died and his family scattered, all in a few months. His hair turned gray and the shock of grief for a long time left strong marks of physical suffering. He resumed business again but frequented low saloons and drank to intoxication. He was forty-eight years old at this time, and seemed to have the same intellectual force, only more quiet and reserved in his manners. He succeeded, but was noted for dishonesty and prevarication. Seemed to take pleasure in overreaching and deceiving others. He drank to excess every night, and was low in his tastes, company, and associates. Great efforts were made to reform him by his church friends. He seemed pleased with these efforts, and was rational in aiding them, promising with great earnestness to do all that was required, but in secret drinking and living as before, all efforts to conceal this becoming more and more imperfect. He gradually became worse, and was sent to Blackwell's Island for drunkenness and fraud several times in the next five years. He is now, ten years from the time of failure in business, a hostler in a small hotel, drinking regularly, and a wreck in body and mind. This was clearly psychical traumatism, beginning at the time of his financial ruin, and marked by the changes of character, disposition, and conduct. His mind to the general observer gave no hint of such change. He reasoned with others clearly about himself, but was unable to carry out any plan when left alone. Two distinct beings seemed to exist, one that would live a natural healthy, pure life as before, the other that sought relief from alcohol and the lowest impulses of nature. As the latter grew he could give no reason for this course, except that he could not help it. He gradually failed, the mind becoming feeble with the body, and the one dominant impulse for alcohol seemed to supersede everything. A diseased condition of the brain centres was present. There was failure of co-ordination, or acting upon the impressions received or sent out from the central ganglion.

Psychical injury from varied causes are traceable in these obscure cases of inebriety, as in the following very common instances: A man with a neurotic inheritance receives a blow on his head and soon after becomes an inebriate. He is confident that this concussion has broken up his health, although he may not trace inebriety to it. It may be in another case a sunstroke, followed by months and years of nerve debility; then inebriety comes on. Some latent inherited nerve-defect may spring into activity from the shock of grief, or sudden powerful depressing emotions. A man fixes all his hopes and ambitions on some special object in life, and suffers from sudden disappointment, the sweeping away of every expectation, followed by intense grief and sorrow, then inebriety. It is these psychical storms which not only break up the normal molecular action of the brain, but prepare the soil for inebriety in the future.

There is another form of traumatism, which is undoubtedly a cause of inebriety, that has never been noticed. It may be termed physical, because it springs from disease and injury that is always apparent. A man has some injury or severe illness from which he recovers, but is never the same after. He is conscious that he has lost some element of force and vigor, and this event has been the switch or the point of departure from the main line of health. In many nameless ways this fact is apparent. Sometimes changes in disposition and character are apparent to his friends, in others want of physical strength and endurance are the prominent signs. Whether he is aware of it or not, changes both psychological and pathological may be traced from such events that merge into insanity, inebriety, or other disorders. A man previously modest and retiring, after an attack of typhoid fever, becomes boastful and assuming, and exhibits decided changes of character. Later he is an inebriate or insane, or has some form of paralysis. Although the direct chain of causation may not be clear back to the typhoid fever, yet there can be no doubt that this was the starting-point.

A patient now under treatment, with a history of ten years' drinking in fast society and bad surroundings, was found to have a period anterior to this as follows: Six years before he began to use alcohol his leg was broken in a railroad accident. An artery was wounded and severe hemorrhage followed, which threatened to be fatal. Convalescence was slow and it was nearly a year before he could resume his business as bookkeeper. From this time his habits became more and more irregular, especially in eating and sleeping, also in work. He was depressed and complained of neuralgia, and could not concentrate his mind on his work. Would take the correspondence home, and after a sleep in the night or early in the morning complete it. Was morbid in his credulity of patent medicines and efforts to find something that would bring relief. His mind seemed the same in his business, and his social relations were unchanged, and yet he was a nervous invalid or neurasthenic, suffering from some alterations of nerve-structure and function. The inebriety really began in this period in the favoring conditions and increasing degenerations, which at last developed into the drink craving. All superstitious notions of vice in the origin of this case disappeared when the history was understood, and a general outline chain of causes were traceable from the time of this injury.

Both of these forms of traumatism have been noticed as causes in inebriety by both English and German authors, but no study has been made of such cases, owing to the impression that they were rare, and always associated with insanity. A wider study will dispel this error. The evidence will appear, from a study of many of these obscure cases, fully sustaining this view of remote injuries to the brain and nerve centres, resulting later in inebriety. No matter how changeable and obscure the progress of the case may be, there will always be a certain regular progression or march, from some point or event of life on to the full development. These physical and psychical storms either alone or together, leave traces and marks that are seen all along the future. The normal vigor and integrity of organism is disturbed or broken, the great outer circle of health is left behind, and life goes on over the border of the shadowy inner circle where health and disease blend and contend.

John B. Gough, in his biography, mentions a severe injury received in childhood, followed by delirium, which, in his opinion, has influenced his entire life physically. This testimony, unconsciously given, of both a pathological and psychological state, is of great significance. The great practical facts which may be demonstrated in the study of every physician, are that all these obscure cases of inebriety are suffering from disease, which is more or less curable if recognized and properly treated—

an affection that cannot be reached by moral means or by appeals to pride or religious emotions, but only from the exact application of physical means suited to the wants of each case. This may be secured in most cases, but only from an absolute quarantine of the patient from every exciting cause. All the surroundings and conditions of life must be under the care of a physician, and every means known to science applied to build up and restore the last energies.

The following conclusions will help to further studies in this field, and may be said to outline some leading facts from which the laws of this disease may be deduced:

First.—All cases of inebriety should be studied carefully to ascertain not only the heredity, but the possible history of traumatism, either psychical or physical. As in epilepsy scars on the scalp may often furnish clear indications of the chain of causes. Fevers, and any disease or events which have profoundly influenced the organism and nervous system are always prominent factors in the history.

Second.—Inebriety is a central disease of the nervous ganglia, which may either follow a regular line of march down to chronicity or death, or be attended with uncertain halts, long pauses, or rapid progress, from some unknown causes; but, whatever its course may be, always following a certain order and regularity, in the stages of degeneration, that is seen and may in many be predicted.

Third.—From a knowledge of the cases the varied means of treatment can be applied which will be most effectual in restoration. If the case is chronic and incurable such a study will point out the best means to limit and control its progress in the least harmful channels.

Fourth.—Inebriety and its problems must be studied by medical men above the superstitious theories of reformers and clergymen, before we shall have any positive facts upon which to base accurate methods of treatment and cure.

ADDITIONAL REMARKS ON

AMPUTATION OF THE REDUNDANT SCROTUM FOR THE CURE OF VARICOCELE.

BASED ON ADDITIONAL CLINICAL OBSERVATIONS AND SUCCESSES.

BY M. H. HENRY, M.A., M.D.,

LATE SURGEON-IN-CHIEF OF THE STATE EMIGRANT HOSPITALS OF NEW YORK, FELLOW OF THE NEW YORK ACADEMY OF MEDICINE, ETC.

THE interest that has been developed and manifested in the treatment of varicocele by excision of the redundant scrotum by the method and with the instruments to which I first called attention eleven years ago, and more recently by the publication of a little work exclusively devoted to this subject, as well as the indorsement and reference of cases from many distinguished friends, tempts me to add further testimony in support of the value of the operation and improvements in the method of operating, based on additional clinical observations and experiences.

The pathological and clinical features of the disease and the theory and *modus operandi* of the operation I perform were so fully explained and so widely circulated in my former contributions that I shall now confine my remarks to some points of practice and further clinical observations, to which my attention has been directed by my own experiences and the inquiries of friends interested in the subject.

The fear of hemorrhage excited in the minds of a few timid and inexperienced persons, through the loose and unfounded remarks of a surgeon of some notoriety, is now entirely set aside by the successes which invariably follow the operation, and by the "perfect facility, precision, and efficiency of the procedure."[1] The theory of the operation is to avoid interference and division of any of the important vessels. With ordinary care there need be no hemorrhage beyond the loss necessarily following the division of the tissues. The spermatic veins and the enlarged veins of the scrotum proper can be avoided in the incisions by attention to the rule, and to which I called attention—to hold the parts that are to be removed in front of the light, and be careful that no vessels are included in the integuments beyond the flat-convex surface of the clamp and the line of division. In the ordinary daylight essential to the performance of any surgical operation, the redundant scrotum will be found perfectly transparent. The division of any vessels beyond the small and superficial scrotal vessels must be the result of carelessnes or want of appreciation of the essential details of the operation.

Regarding the amount of scrotum to be removed, I can only say that I take away all not absolutely necessary to form a covering to hold and retain the testicles in a normal and comfortable position. There is no danger whatever of removing too much in this operation if the clamp is skilfully applied—without skill there is more probability of a second operation being called for to remove more tissue. To one who has had no experience in the operation, it at first seems as if too much were removed, but there is invariably more or less tendency to relaxation of the scrotum. With the recovery and renewed resiliency of the spermatic veins—by shortening of their axes and less dependent condition—there is less strain, and with this lessened strain and increased tonicity of the scrotal integument there is less probability of much further relaxation of the scrotum, at least, not more than can be tolerated with perfect comfort. Skill and experience can only be acquired in the performance of operations—it will enable the operator to decide with the nicest precision the amount of tissue to be removed.

The clamp should not be applied until all the other arrangements for the operation are perfected and the patient placed under the full influence of the anæsthetic. This is to avoid compression of the parts longer than is absolutely necessary. The pressure and constriction of the parts when embraced within the blades of the clamp is great, and it is of decided advantage to remove the instrument as soon as convenient, thus enabling the parts to recover from the pressure more quickly and increasing the chances of an early union. In spite of the distress and frequently intense pain endured by persons suffering from varicocele, many authors still advise the temporary expedient of suspensory bandages or soft metal rings—bent to suit the wearer—a continuance of which may afford a partial relief from very severe pains, but does not in the least retard the progress of the disease. Many surgeons still ligate the veins and assume risks to life or risks of the loss of the function of the testicles quite beyond any corresponding advantage which this operation can afford. Among the persons upon whom I

[1] Remarks by Dr. R. J. Levis, before the Philadelphia County Medical Society (Medical Times).

have operated this year, one was especially interesting as a typical case, embracing all the worst features of the physical disease associated with intense mental suffering. He is forty years of age, of a nervous temperament, very tall and slender, and, if I may use the expression, of a neuralgic diathesis. He describes his case and the result of the operation so well in a letter to me, three weeks after the operation was performed, that I know my readers will not object to my putting it in evidence, omitting only references to my manner of operating.

"NEW YORK, April 8, 1882.

"*My Dear Doctor*—It is three weeks to-day since you performed on me the operation of removing redundant scrotum, an operation so earnestly advised by you to relieve me of the painful consequences of the excessive enlargement of the veins along the spermatic cord of the left testicle, which for twenty years had assumed proportions as large as a small apple, distending the scrotum to five or six inches in length, causing unceasing pain and unspeakable annoyance, the constant use of a suspensory bandage, and, besides, a supreme disgust at such a malformation. and dejection of spirits at the thought that I should be doomed to endure this horrid malady for the remainder of my years.

"I cannot command words adequate to express the gratitude I feel toward you for recommending so earnestly the operation. . . . . The wound has entirely healed, showing hardly a sign of any disturbance at all, while I have been confined to my room less than a week, attending to my daily avocations the balance of the time.

"As to the advisability of the operation, there would seem to be no room to question it. Three weeks ago I was a hopeless, helpless invalid. To-day I am well—my symptoms or sensations being normal, that is, delightful. The comfort it has already afforded me can therefore be comprehended by nobody except him who has endured as I have the torments of this fearful malady. The local trouble is effectually cured, and unless I mistake other evidences, I am certainly improving in general health, for I had been dragged down and greatly enfeebled by this serious affliction. I wish I could proclaim to every like sufferer my speedy deliverance and commend to him the means by which it has been secured. Thanking you again and again for the boon you have brought me, believe me gratefully yours."

This is not an isolated case, it is one of many, or of a class to which my attention is now frequently called. I may state here that at the time of writing this article (October 20th) this gentleman is perfectly well, and has had no return of any of the painful symptoms so graphically described in his letter.

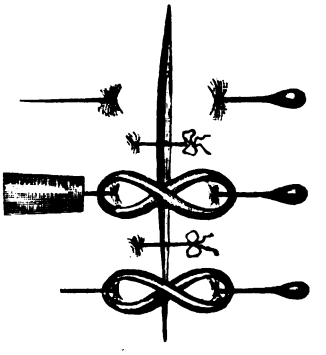
In my early operations I relied mainly on the ordinary interrupted suture. I now use only the silver pins one-half inch apart and a simple stitch to retain the skin-tissue edges in immediate contiguity in the intervening spaces. Success in the so-called after-treatment depends on the manner and care of the wound after the operation. This must always be dependent on the operation itself and the course pursued in the dressing and plan of subsequent treatment.

In the use of the ordinary interrupted suture there is some danger of the ligature ulcerating through the parts, and in case of much swelling it is sometimes tedious, difficult, and painful to remove the stitches. If there is much œdema the dragging sensation in the wound is a source of no small annoyance to the patient, and the suture excites a constant sensation resembling the cut of a knife. By the use of the pins the parts are more firmly secured, the edges are in more perfect apposition, there is no dragging of the edges of the wound, there is less danger of any ulceration of the edges, there is a better chance of union by first intention, a greater feeling of security against any opening or disturbance of the wound in the absence of the surgeon, and less danger of any superficial hemorrhage from the cut surfaces.

The pins are inserted through the divided tissues, so that the edges are maintained perfectly in apposition. In the intervening spaces a fine silk suture is used, only through the skin, for the purpose of preventing the edges from rolling outward. This obviates the necessity of a large number of pins. As an additional safeguard in preventing the edges from rolling outward, great care should be exercised against pressing and tying the edges too closely; *gentle* apposition, not *forcible* apposition, is the only way to secure the quickest and best union. I dwell on this point, because I have, on a number of occasions, been asked how to avoid this condition.

The pins are all inserted through the tissues directly under or close behind the concave surface of the blades of the clamp before the scrotum is removed. In this operation the anterior or convex side of the clamp is the guide for the incision. The detachable guide is not used when the operation is done in this way. Here let me remind my readers that Messrs. Tiemann & Co. and their agents are the only makers who have fully followed my instructions in the manufacture of the clamp. Many clumsy instruments by other makers are unwarrantably sold as mine.

I prefer stout silver pins, one inch and a half long. To facilitate the insertion of the pins and to prevent the small heads from burying in the flesh if swollen, I cover the heads with a little sealing wax; this also aids in retaining the ligature on the



one side of the wound. When the pins have all been inserted, I then fix a small cork in the pointed end of each pin, half the length of the cork, the exact size of which is seen in the accompanying illustration. This serves the double purpose of preventing the edges and wound from spreading wide apart when the clamp is removed, and affords ease in placing the ligatures on this side of the pins. As soon as this is accomplished the redundant scrotum is cut off and the clamp removed.

The next step is the application of the figure-of-

eight silken threads around each pin in the manner used in cases of hare-lip. The intermediate edges are then stitched with fine silk to prevent bulging, as already described. The corks are then removed, the pointed ends of the pins cut off and a strip of thick adhesive plaster placed parallel with the line of wound under the sharp edges of the pins to prevent them from irritating the skin. A simple dressing of cold water with a few grains of carbolic acid to the ounce is the only application necessary.

The pins are usually removed on the third day, and here I desire to call special attention to the manner of their removal. With a little skill they can be withdrawn without causing the patient any pain. Disregard of these details will induce intense suffering. The pins should be carefully selected—silver, or thoroughly plated. Many of the pins sold are of base metal and oxidize in the wound to such an extent that their removal causes great pain. Before the pin is removed the wound should be thoroughly cleansed and the ligatures softened and cut away. The pin should be very gently rotated before removed. The rotation, if gently done, breaks the little attachments formed by incrustation with the tissues and prevents dragging and tearing of the freshly united parts. These details may seem trifles. They are not; they prevent suffering to the patient, they assist in sustaining the integrity of the wound, and lessen the period of detention and confinement of the patient.

The swelling or œdema which follows the operation invariably subsides in a few days. The treatment following the removal of the pins consists mainly in keeping the wound perfectly clean. The little points that have not united by first intention, may—if thought necessary—be gently stimulated to advance the healing process. With my own increased experience, assisted greatly by cases furnished and observations afforded by my professional friends, I am thoroughly impressed with the advantages of this operation.

Among the surgeons who have adopted my method of treating varicocele none have been more eloquent in their praise of its merits than my friend Dr. R. J. Levis, of Philadelphia. Under my own title he recently contributed a short article to the *Medical Times*, and indorsed all that I have claimed of its superiority over other forms of surgical treatment. After enumerating the objectionable features of ligation of the veins—the danger to life—want of confidence in its permanent benefits, and the liability to loss of the function of the testicle on the side operated upon—a full account of which will be found in my work[1], and formulated in my conclusions on pages 23 and 24—he says: "It is now with much satisfaction that I adopt by preference a method of operating which seems to be entirely efficient, and which appears to be free from all the risks and other objections referred to." In alluding to the operation in a recent letter—September 29, 1882—he says: "I have operated very many times, and the operation grows in favor in my estimation. The results are excellent, and always satisfactory to the patients."

My attention was recently called to a case, operated on by a friend, in which there was bulging of one testicle in front of the other after the operation. This would not have occurred if the blades of the clamp had been placed parallel with the line of the raphé, and the major portion of the redundant scrotum removed from the anterior surface. This accident, or rather condition, was due to the removal of too much tissue from the lower and posterior surface of the scrotum, thus forcing the lower testicle upward and forward. It affords an additional reason for care and nicety in the adjustment of the instrument.

I am averse, on general principles, to enter into any discussion with reviewers of my works on the merits of any of my contributions. I cannot, however, forego the temptation to remind the distinguished reviewer of the *Lancet*[1] that his objections to the operation which I advocate were all disposed of in my work[2] by testimony that is beyond cavil or dispute—the testimony of time and the evidence of men whose intelligence and judgment no one can gainsay.

I am well aware "that laxity of scrotum is certainly not the cause of varicocele, but when present, is generally its effect, and it is unscientific and bad surgery to confuse cause and effect, and treat the latter for the former; and, after all, the operation does no more than can be effected by a good suspender."

These statements are so fully answered in my work that I mention them now only to fix the attention of my readers to the fact that such objections have been fully accounted for and refuted. I have in this communication furnished additional testimony to show that "a good suspender" *does not* afford the relief desired by sufferers from varicocele.

If any of my readers desire further evidence in support of the claims I have made of the value and advantages of this operation, I beg—aside from the testimony of the patients—to call their further attention to the testimony of my distinguished *confrères*—Gross, Van Buren, Ashhurst, Otis, Barton, J. C. Hutchinson, Bumstead and Taylor, Hammond, Clymer, D. H. Agnew, Little, and others. I mention these names because they have so kindly referred to my contributions in their published works, and by correspondence and reference of cases.

There is a pleasure in the practice of surgery, aside from the satisfaction and ability to relieve suffering and cure disease—it is the opportunity to advance and add to our resources improvements and additional means of cure the full benefits of which can only flow from the co-operation of a large number of toilers in the same field and with the same purposes in view.

427 Fifth Avenue, New York.

[1] Treatment of Varicocele by Excision of Redundant Scrotum. Illustrated by New Instruments and an Account of Fifteen Successful Cases. New York: J. H. Vail & Co. 1881.

[1] February 11, 1882, p. 232.

[2] The Treatment of Varicocele. New York: J. H. Vail & Co. 1881. Pp. 8 and 9.

Another Substitute for Cod-Liver Oil.—Among the numerous substitutes for cod-liver oil which have from time to time been brought before the notice of the profession, dugong oil, which is an extract obtained from the dugong, an herbivorous cetacean inhabiting the warm seas of the coasts of Australia and the Eastern Archipelago, has met with a most favorable reception. Dugong oil is free from the unpleasant odor and taste which characterize cod-liver oil, and is much less liable to change in keeping. At ordinary temperatures it is opaque, from the separation of its more crystalline constituents, but becomes clear and almost colorless when slightly warmed. The dose is the same as cod-liver oil.

SUCCESSFUL TRACHEOTOMY FOR DIPHTHERITIC CROUP, IN A CHILD ELEVEN MONTHS OLD.[1]

By GEORGE F. SHRADY, A.M., M.D.,

SURGEON TO THE PRESBYTERIAN AND ST. FRANCIS' HOSPITALS, NEW YORK, CONSULTING SURGEON TO THE HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK.

But a very small number of successful cases of tracheotomy in children under one year of age have thus far been recorded. Indeed, so fatal is the operation in subjects under two years of age that most of the authorities object to its performance during that early period of life. The reasons for the decision are founded upon extensive statistics furnished by the most experienced operators. Jacobi gives the rate of mortality from tracheotomy during the first year of life as high as 93.3. Cohen makes the general statement, based upon most exhaustive study of the subject,[2] that very few children under two years are saved by tracheotomy, even when the latter is performed under what might be considered advantageous circumstances. He quotes Isambert as saying that during a service of two years in the Hôpital des Enfants Malades, under Guersant and Blache, it was almost a rule that no case under two years of age, or at least under twenty months, should be operated upon, because of the non-success which attended them. Bourdillat gives three recoveries in one hundred tracheotomies upon children under two years of age. Wilms reports no success within that age.

Associated with the tender age of such patients are conditions which deserve to be considered as militating against the success in the operation. These are, in the main, the narrowness of the trachea, the shortness of the neck, the deficiency of vital power, the intensity of the traumatic fever, and the subsequent difficulty of nourishing the patient. It will be seen, then, that the following case of successful tracheotomy, on a child but *eleven months old*, for diphtheritic croup, is worthy of record.

I was called, January 29, 1882, to see Edward K——, aged ten and a half months, who was suffering from symptoms of advanced diphtheria. The tonsils and naso-pharynx were covered with the characteristic membranous deposit; the temperature was 104° F.; and the patient was in a feeble condition. The usual local treatment of the disease was followed, together with the internal administration of carbolic acid (syr. iod. phenique, Déclat), and the case progressed favorably until February 10th, when hoarseness and other symptoms of commencing laryngeal obstruction first showed themselves.

The following day, February 11th, the patient having lost much ground and the stenosis increasing, I availed myself of the counsel of Dr. J. H. Ripley, who kindly saw the case with me. Although every symptom pointed toward the probability of ultimate laryngeal obstruction, we agreed that the time for tracheotomy had not yet arrived.

On the 12th the symptoms progressed, but were still not considered sufficiently grave to demand the operation.

On the night of the 12th the child had a severe attack of suffocation, but the parents not having brought themselves to consent to tracheotomy did not summon me. Early the following morning, when I visited the patient, I deemed any further delay unwarrantable. An invitation was sent accordingly to Dr. Ripley, who was present at the operation and who rendered me valuable assistance. The parents were informed that the case was a desperate one, that in all probability the child would die of suffocation in a very short time and that tracheotomy might ward off only for a time the death struggle. In fact, the operation offered the last and only chance for saving the child. The responsibility of deciding was then left with the parents. This they bravely assumed in their dire extremity, and the child was delivered to me in the gasping throes of rapidly approaching suffocation. Chloroform was administered, on account of the struggles of the patient. The incision was made in the usual manner, the trachea readily exposed, being hardly larger than an ordinary goose-quill, and the opening made immediately below the cricoid cartilage, through two of the upper tracheal rings. The hemorrhage was slight. Immediately after the insertion of the tube there was a considerable discharge through it of bloody mucus. All the urgent symptoms of difficult breathing then subsided. The wound was closed by sutures above and below the tube, and a moist sponge secured over the latter. The child was then given to the parents, who had never expected to see it again alive.

Contrary to expectation, the surgical fever was not high, the temperature not ranging within the first forty-eight hours beyond 102½° F. There was no difficulty in swallowing after the operation. During the four days following there was a profuse discharge of ropy mucus and shreddy membrane through the canula, necessitating the changing and cleansing of the inner tube four or five times daily during that period. The lower portion of the wound became much swollen and inflamed on the second day, when the sutures were removed, and when a diphtheritic coating was noticed over its surface. Hardly daring to believe that a child so young could, under such circumstances, survive, it was, however, determined, by unremitting personal attention to the details of after-treatment, to secure, if possible, the desired result. Dr. Ripley, being also much interested in the case, saw it with me at different stages of its progress, and aided me by many suggestions based on his own extensive experience in the surgical treatment of croup. The outer tube was not changed until the fourth day, when a washer of soft lint, lubricated with carbolized vaseline, was applied, thus protecting the underlying granulations.

On the fifth day a considerable quantity of broken down diphtheritic membrane was ejected from the fauces during an act of vomiting, and later, on the same day, the child nearly suffocated during the escape of a similar material through the canula. On the evening of the seventh day the lower end of the canula became suddenly blocked, and except for the prompt action of the watchful mother, who removed both tubes, the child would have suffocated. Subsequently both tubes were changed every other day, until the thirteenth day after the operation, when they were removed permanently. The wound then rapidly healed by granulation, and finally closed entirely by March 1, 1882, by which time the child was cured. He still remains in perfect health.

It is quite evident to me that the success in this case was mainly due to the great care in keeping up the strength of the patient by stimulants and in

[1] Read at a meeting of the Practitioners' Society of New York, September, 1882.

[2] Croup in its Relations to Tracheotomy. J. Solis Cohen, M.D., Philadelphia, 1874.

guarding against plugging of the tube by frequent removal and cleansing of the latter. The mother, who nursed the child herself, was instructed to be in readiness for any emergency of impending suffocation. Aside from this, the case being in my immediate neighborhood, I was enabled to keep constant watch of it, making several visits daily during the first week after the operation. Considering the good effects claimed for the breathing of warm moist air after tracheotomy, this case was an exceptional one. The moist sponge could not be kept in position at the mouth of the tube even for short periods without occasioning distress to the child. He appeared to get along well enough without the vapor, and was consequently let alone. At no period in the after-treatment did any difficulty arise which might have been prevented or relieved by the use of moist air.

The point of greatest interest in this case is the result of tracheotomy for diphtheritic croup in a child so young. As far as I have been able to learn, this is the first case of its kind of recovery under one year of age that has been reported in this country. In fact, it forms one of a very few similar results recorded by European surgeons. With the assistance of Dr. W. D. Dietz, I have made an extensive search of the literature of the subject, and have been able to collect but seven of such cases. All of these were obtained either from Cohen's work on tracheotomy, or, since its publication, from him personally. For convenience, they are arranged, along with the case herein reported, in the following form, indicating the age of patient when the operation was performed, the name of the operator, time of permanent removal of tube, when stated, and the original reference.

Age of patient.	Operator.	Permanent removal of tube.	Reference.
7 months..	Langenbeck	.....	Langenbeck's Arch. klin. Chir., XXI., p. 253.
7½ " ..	Joseph Bell, Edinburgh, Scot.	.....	Edin. Med. Jour., 1861, p. 956.
8 " ..	Dr. Elias. Breslau.....	33d day....	Dnb. Jour. Med. Sci., June, 1879, p. 560.
10 " ..	M. Baizeau, Algiers..	10th "	Gazette des Hopitaux. 1867. p. 397.
10 " ..	M. Bourdillat, Paris, France	15th "	Union Médicale, June 8, 1872.
10 " ..	J. Cooper Foster, London, Eng.	.....	Brit. Med. Jour., March 25, 1871.
	W. S. Greenfield, London, Eng.	22d day....	St. Thomas' Hospital Rep., 1878, p. 259
11 " .	Geo. F. Shrady, New York.	13th "	MEDICAL RECORD, N. Y., p. 512.
1 year [1]....	M. Dujardin, Lille....	8th month.	Union Médicale, 1872, p. 46.

There have also been reported a few other instances of recovery in very young infants after tracheotomy, but in none of them is it stated that the operation was for diphtheritic croup. It may be proper, however, to mention these in this connection for the purpose of including all the cases found of recovery under one year after tracheotomy, for whatever reason performed. Scontetten's case ("Soc. Méd. des Hôp. de Paris," 1867), in his own child, six weeks old, was evidently one of spasmodic croup, in the radical treatment of which the father's fears overbalanced his judgment. Annandale (*Edin. Med. Jour.*, 1862, p. 112) reports a case in a child three months old. Impending suffocation appears to have been due to a retro-pharyngeal abscess. The child lived but seven weeks, and was wearing the tube at the time of death. Evidently for the same disease Steinmeyer (*Berlin klin. Woch.*, 1880, No. 40, p. 572) performed the operation successfully on a child aged nine weeks. Mr. Croft had a similar result on a child aged six months (*Lancet*, 1880, p. 849) who was suffering from symptoms of œdema of the glottis, associated with an erysipelatous inflammation and œdema of the entire cervical region. No false membrane was found; neither did croupous cough exist. Mr. Lawson Tait, of Birmingham, mentions (*Brit. Med. Jour.*, April 15, 1871) a successful case at seven months, but no other particulars are given. The same is the case with another, aged nine months, in which he believes that the child was destroyed by its mother, who deliberately obstructed the tube, three weeks after the operation.

247 LEXINGTON AVENUE, NEW YORK.

[1] Sanné (Traité de la Diphthérie, Paris, 1877) gives ten months as the age of Dujardin's patient, as does also Cohen, but Dujardin, in his own report (Union Medicale, 1872, p. 46) states that the child was one year old.

Progress of Medical Science.

EUCALYPTUS GLOBULUS IN GYNECOLOGICAL PRACTICE.—This drug is destined to play an important part in gynecological therapeutics. It is only since 1865 that its therapeutic action has been tested, and, with the cloud of new remedies constantly before the attention of the profession, it has not received the full trial which it is sure to get eventually.

Dr. Andrew F. Currier reports in the *American Journal of the Medical Sciences* for October, 1882, five different cases of various natures in which the local application of this drug on vaginal tampons proved of the greatest anæsthetic value. Besides its anæsthetic effects, it is, as we know, antiseptic and antiperiodic, and hence it will be of use in that large class of cases where foul-smelling discharges exist, and also as an adjuvant in the treatment of malaria. The absorptive function of the vaginal mucous membrane has been comparatively little employed in constitutional treatment, and this is a field which yet remains to be worked up. A daily application of this substance must have more than a local influence. It will usually be difficult to give treatment so frequently, excepting in hospital practice. Much better results would follow could a continuous effect of this, as well as of some other means of treatment, be obtained, but the expense and the annoyance, and in many cases the dread of pain prevent. The very fair degree of success obtained in treating the cases described in this paper leads him to believe that in less severe cases we can feel almost positive that we can give great relief; indeed, his experience in private practice confirms that belief. In a quite different class of cases eucalyptus will also be serviceable. He refers to wounds of the breast after the removal of tumors. With the increasing favor of the open method of treating such wounds, especially when the growth removed has been of a cancerous nature, its stimulant and antiseptic properties will prove very acceptable.

THE DIGESTIVE POWER OF COMMERCIAL PEPSIN.—Dr. C. L. Dana reports, in the October number of the *American Journal of the Medical Sciences*, a num-

ber of careful experiments as to the digestive value of various forms of commercial pepsin, both in the stomach and in artificial digestion.

His experiments show, (1) that different brands have different strength; (2) that the same brand may vary in strength at different times; and (3) that there are a number of details connected with the process of artificial digestion by which the power of the pepsin can be greatly modified.

They further show that ten grains of ordinary commercial pepsin will generally digest ten or twelve times its own weight of coagulated egg-albumen, finely minced, in four to six hours. It has, however, very little effect upon lumps of albumen or upon boluses of lean or cooked meat.

This is the case outside the stomach. If it does no better when given medicinally, or even if it does considerably better, its power as a remedy must be very slight.

In conclusion, he holds that a physician in giving a dose of *good* pepsin may believe that it will have a value two or three times greater than that exhibited under ordinary artificial conditions, *i.e.*, it will digest twenty or thirty times its own weight. This conclusion is in harmony with much clinical experience, that *good* pepsin has a *real* though not a *great* medicinal value.

Points of practical importance are, that large doses should be given, even of so-called pure pepsins. The physician should always know how much pure pepsin there is in the saccharated preparations. Acid should generally be given immediately before, and the pepsin after meals.

EYE DISEASES DEPENDENT UPON SUPPRESSION OF MENSES.—In the *American Journal of the Medical Sciences* for October, 1882, Dr. R. J. McKay reports twelve cases in which suppression of the menses was accompanied by disturbance of vision. Cases of this kind demand prompt recognition as to their etiology (before vision is too much impaired by the internal eye disease) in order that they may be successfully treated and relieved. Partial loss of vision, and inability to use the eyes in young healthy looking females, without external eye disease, always suggest to his mind the probabilities of menstrual disturbance, and he makes it a rule to at once inquire about the matter.

Young school-girls often manifest asthenopia (weak and painful sight) about the time their menses are being established, and especially if their menses become irregular from any cause, which may produce partial or complete suppression for an indefinite time. Sometimes they manifest decided congestion of optic papillæ and retinæ, and others no internal eye lesion, with exception of strain of their accommodation. This is common to all such cases, for they have some refractive deformity of their eyes. The latter sooner or later causes their muscles of accommodation to rebel from their overtaxing and too continuous work.

THE TREATMENT OF EMPYEMA.—In an elaborate article on this subject in the *American Journal of the Medical Sciences* for October, 1882. Dr. William C. Dabney draws the following conclusions:

First.—"Medicinal" treatment, as it has been called, namely, treatment without operation, occasionally gives favorable results, but is not advisable, inasmuch as cases so treated are liable to terminate in one or other of the following ways: *a*, Sudden death; *b*, exhaustion; *c*, suffocation; *d*, phthisis; *e*, septicæmia; *f*, calcareous degeneration of the pus; *g*, secondary pneumonia and gangrene of the lung; *h*, peritonitis from the bursting of the empyema into the peritoneal cavity; *i*, amyloid degeneration of the liver, kidneys, etc.

Second.—Aspiration has given good results in the case of children, and should be tried in them before the radical operation is resorted to.

Aspiration and immediate washing out of the pleural cavity through the aspirator (Kashimura's treatment) has not been used sufficiently often for any conclusion as to its efficacy to be reached.

Third.—Free incision into the pleural cavity is usually necessary, and the best point for such an incision when only one is made is at the lowest point of the purulent collection, and directly below the angle of the scapula. Costal resection is to be avoided if possible, especially in children.

Fourth.—Continuous is preferable to intermittent drainage, because, *a*, the danger of absorption is thereby lessened; *b*, there is usually less danger of irritative fever; *c*, the empyemic cavity is placed in a better position for healing. Continuous drainage is best effected by a drainage-tube.

Fifth.—Through drainage is only advisable in cases where the discharge is very fetid, and where a single opening has proved insufficient.

Sixth.—The thoracic opening should not be allowed to close if more than two drachms of pus are discharged daily.

Seventh.—The danger of sudden death during thoracentesis or injection of the pleural cavity, when proper care is used, is so slight that it may practically be disregarded; but when injections are used, especial care should be taken to see that they have a free outflow.

Eighth.—Simple injections of pure water are often sufficient, but compound tincture of iodine, one part to four of water, is devoid of danger, and hastens recovery. This will usually check fetor also; but if it does not, salicylic acid or permanganate of potash in one-half or one per cent. solutions, may be employed. Carbolic acid is dangerous, as is boracic acid also.

Ninth.—Listerism would probably be advisable in city or hospital practice, but is of doubtful efficacy in the country, and under no circumstances should it be allowed to interfere with thorough drainage.

ECHINOCOCCUS DISEASE IN AMERICA.—In the *American Journal of the Medical Sciences* for October, 1882, Dr. William Osler, of Montreal, publishes sixty cases which he has collected from the museums, journals, transactions, and from private sources. In the inspection of over eight hundred bodies, only three cases were met with.

The accidental ingestion of the eggs of the tiny *Tænia echinococcus* of the dog produces the most serious and fatal parasitic disease of man. The affection prevails extensively in certain countries, as Iceland and Australia, where the habits of the people or the relations of the canine host to man insure easy means of communication. In Europe the disease is not uncommon, and at any one of the larger clinics several examples are sure to occur during the session. So far as we know, the facts of its occurrence in America have not been investigated and the object of this paper is to give an account of an inquiry into its prevalence.

THE CONTAGION OF LEPROSY.—In the *American Journal of the Medical Sciences* for October, 1882, Prof. James C. White contributes a valuable paper

in which he traces the origin of leprosy in the Hawaiian Islands, New Brunswick, Cape Breton, and the United States. In the study of the disease observed in these various localities, he finds evidence that it is communicable from man to man by direct transference, or facts which can be interpreted in no other reasonable way, and this conclusion he accepts as supported by the general history of the affection in past times as related by medical chroniclers. He accordingly feels justified in forming the following conclusions: Leprosy has spread under recent observation, when introduced into a previously unaffected stock, in so rapid and general a way as to prove that it may diffuse itself universally through a nation independently of the action of hereditary tendencies. There is no evidence to support the assumption that this wide and quick extension of the disease has been caused or aided by any peculiarities of soil, climate, diet, or other telluric agency in Hawaii. The history of the affection, on the other hand, leads to the strongest conviction (scientific proof is well-nigh out of the question) that it is communicated directly from person to person, while the peculiar customs offer a satisfactory explanation of its unparalleled spread. The history of the little centre of disease in Louisiana, watched, fortunately, from its very beginning, leads to the same conclusion, that it affects persons not under any law of heredity, but through the intimacy of personal relationship, the customs and morals determining largely the rapidity and universality of its spread.

As regards the bacilli of leprosy, Dr. White believes that there is nothing in the history or pathology of leprosy incompatible with the theory of its parasitic nature. Should a bacterium be constantly found in the disease, the leprous tissue itself, most pronounced in that in process of development, presenting the same characteristic features in cases occurring in all parts of the world, and not found in human tissues in connection with other diseases or in their healthy condition, it would constitute strong presumptive evidence that this parasite was the specific cause of leprosy. The proof would be positive if its inoculation were found to reproduce the disease. As yet, however, proof of this character has been merely negative. He is a strong advocate of the isolation of lepers.

Feeding with Dried Blood.—M. Regnard (*Le Progrès Médicale*, No. 23, 1882), suggests the employment of dried blood as food. In the case of six orphan lambs, three were fed on the ordinary vegetable food, and three on the same plus a certain quantity of cooked and dried blood. The first three died, while the others developed splendidly. He remarked that if these results are confirmed, these economical results will be considerable, as it will permit the utilization of the hundreds of thousands of pounds of blood wasted in the slaughter-houses of Paris alone. He quoted a case of rickets in a child in which this food had given excellent results.

A New Method of Reduction in Dislocations of the Humerus.—In the September number of the *Dublin Journal of Medical Science*, Dr. J. E. Kelley describes a rather novel method of reducing luxations of the humerus. He states that he accidentally hit upon this method in a case in which he had exhausted every means of reduction without effect. He has since then successfully employed it in over twenty cases. The selection of a couch or bed is of importance for his operation.

It should be firmly fixed and hard, and when a choice is practicable, he prefers it, for the subglenoid dislocation, to be about three inches lower than the great trochanter of the operator, whilst one lower still by a few inches, for the anterior dislocations, and a little higher for the posterior, allows the force to be applied advantageously in the direction of the glenoid cavity. The patient should be placed as close as possible to the edge of the couch, on his back, with his head low. In order to make the description of the procedure intelligible he divides the operation into two stages: The first, or preparatory stage in which the surgeon takes the most favorable position for the reduction, is assumed by placing the injured arm at right angles to the body, and standing against it with the side to the patient and the hip pressed firmly, but not roughly into the axilla. The operator folds the arm and hand of the patient closely round his pelvis, and fixes the hand firmly by pressing it against the crest of his ilium. The second stage, during which the reduction is effected, is very simple, consisting merely of a rotation or version of the surgeon's body, until his back faces the side of the patient, with a force and rapidity which necessarily varies with the peculiarity of the dislocation—some yielding most readily to a sudden and powerful effort, and others to gentle and gradually increasing traction.

For any additional "manipulation," the surgeon has the hand next the patient's axilla disengaged for such manœuvres as lifting the head of the humerus into its cavity, making traction upon it forward or pressure backward, according to the nature of the dislocation. The fixation of the scapula, a point of considerable importance, is secured by its position between the couch and the body of the patient, while its inferior angle is supported by the gluteal region of the operator.

One of the great advantages of this operation is the ease with which the surgeon can reduce almost any dislocation without assistance or the appearance of violent exertion. But should a case of peculiar difficulty present itself, additional extension may be applied by one or more assistants making mediate or immediate traction on the patient's arm; and the counter extension is as readily increased by pressure on his uninjured shoulder or his pelvis.

The importance of being able to dispense with anæsthesia in such operations is indisputable, especially when the surgeon is summoned to perform them suddenly and without assistance, as so frequently occurs in dislocations. Dr. Kelley claims this advantage to a very great extent for his method, as in only one case in his experience has he had to resort to that or any other auxiliary.

The Ether Spray an Immediate Cure for Neuralgia.—Dr. McColganan extols the value of the ether or rhigolene spray for the instantaneous relief principally of facial neuralgia. He first had occasion to observe its good effects upon his own person, he having suffered greatly from facial neuralgia. Since curing himself, he has had occasion to test its efficacy in about twenty cases. The result was invariably a most gratifying success. In many instances a permanent cure was established. He attempts to explain its action by supposing a complete change to take place in the nutrition of the affected nerve in consequence of the intense cold acting as a revulsive.—*Southern Practitioner.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, November 4, 1882.

THE ANNUAL REPORT OF THE SURGEON-GENERAL.

"THE Annual Report of the Surgeon-General of the Army," just received, gives a very satisfactory exhibit of the work done in his department during the fiscal year ending June 30, 1882. The statistics, which bear the evidence of much care and thoroughness in their collection, present many points of interest to such as are given to the study of military hygiene in its relations to the effective utility of standing armies. The data upon which this portion of the report rests cover many conditions of climate, situation, race and environment, giving the summarized results a proportionate value.

With an average mean strength of 20,778 white, 2,265 colored troops, and 245 Indian scouts, the total number of cases (white) of all kinds taken on the sick list was 34,880, being at the rate of 1,679 per thousand of mean strength. Of this number 4,527, or 218 per thousand of strength, were for wounds, accidents and injuries of all kinds. The average number constantly on sick-report during the year was 942, or 45 per thousand of mean strength. The total number of deaths among the white troops was 216, or 10 per thousand of mean strength. Of these, 141, or 7 per thousand of strength, died of disease, and 75, or 3 per thousand of strength, of wounds, accidents, and injuries. The proportion of deaths from all causes to cases treated was 1 to 161.

The number of white soldiers discharged the service on "Surgeon's Certificate of Disability" was 848, or 41 per thousand of mean strength.

The total number of cases of all kinds among the *colored troops* reported was 4,099, or 1,810 per thousand of mean strength. Of these, 618, or 273 per thousand of strength, were due to wounds, accidents, and injuries. The average number constantly on sick report was 100, or 44 per thousand of strength. The total number of deaths of colored soldiers reported from all causes was 25, or 11 per thousand of mean strength. Of these, 16, or 7 per thousand of strength, died of disease, and 9, or 4 per thousand of strength, of wounds, accidents, and injuries.

The proportion of deaths from all causes to cases treated was 1 to 164.

The total number of colored soldiers discharged on "Surgeon's Certificate of Disability" was 98, or 43 per thousand of mean strength.

The total number of cases reported among the Indian scouts was 56; being at the rate of 229 per thousand of mean strength. Of these, 43 were cases of disease, and 13 of wounds, accidents, and injuries. The total number of deaths was 9; 4 from disease and 5 from wounds.

To such as care to analyze these exhaustive statistics it must be apparent that the usual relations of sickness to the other accidents of military life reach the ordinary average maintained by standing armies, and all other things being equal the mean working strength of our soldiers is at a high standard.

But what must interest the medical profession more particularly is the manner in which the Surgeon-General and his efficient assistants are endeavoring to utilize the immense amount of scientific material at the disposal of the department. The work in these directions has been immense, owing to the perfect system with which it is carried on. And too much praise cannot be bestowed upon the steady and untiring efforts, not only in the preparation of the forthcoming volumes of the "Medical and Surgical History of the War of the Rebellion," but in the more permanent preservation and more ready utilization of reports of sick and wounded constantly received from the various military posts.

It is gratifying to learn that the manuscript of the third surgical volume of the "Medical and Surgical History of the War" is now sufficiently advanced to allow the volume to be completed and laid before Congress during the coming session. The profession of the county will anxiously await its speedy publication. There can hardly be a doubt that Congress will grant the necessary appropriation to such an end.

The Army Medical Museum has been considerably enriched by the addition of specimens, while the library is constantly crowding its shelves with the choicest medical literature of this and other countries. At present, as a library, it is without a rival, numbering fully fifty-seven thousand volumes, and over sixty-three thousand pamphlets. Over three thousand volumes have been added during the past year.

In view of the value of the specimens in the museum, and of the volumes in the library, another timely recommendation is made by the Surgeon-General for a suitable fire-proof building to guard against accidents. There can be but one view of

the absolute necessity of such a measure, as we have often said before.

Notwithstanding that the number of vacancies reported last year have been filled by new appointments, there are, in consequence of retirements and promotions during that period, a vacancy in the office of Assistant Surgeon-General, and six vacancies in the grade of assistant-surgeon.

Although we have given a somewhat lengthened review of the report, we can scarcely do it the justice it deserves for the presentation of thorough systematic and valuable work done in the department during the past year. The profession have just reasons for being proud of the achievements of the Army Medical Staff, for not only has it proved itself equal to the emergencies of war, but is capable of improving to the uttermost the opportunities of peace. In no other similar corps the world over is better and more thorough scientific work done. The indisputable facts upon which this statement rests are, the Army Medical Museum, the National Medical Library, and the History of the War of the Rebellion.

THE SALICYLATES AND BLISTERS IN ACUTE RHEUMATISM.

The discussion upon the value of the salicylates in acute rheumatism, which took place before the London Clinical Society last winter, awakened a widespread interest which has not yet ceased. The general tenor of the debate, as we recall it, went to show that the salicylates were not specifics in inflammatory rheumatism, that they did not lessen cardiac complications, that subsequent joint affections were quite as common, and that the patients' stay in hospital was nearly as long as when treated by other methods, some statistics even making it longer.

On the other hand, it was shown that in the great majority of cases it rapidly relieved the symptoms of pain and fever.

There has lately sprung up a wave of skepticism as regards the value of the salicylates. The general practitioner soon finds that in acute rheumatism the hardest and most annoying thing to treat is not the pyrexia, the severe pains, the swollen and tender joints, which belong to the acute stage, but the obstinate relics of the disease which linger in the system, crippling the patient just enough to make, with health apparently so near, his helplessness exasperating.

The salicylate treatment has lately been attacked with much earnestness by Dr. Alexander Harkin, in a series of articles which appeared in the *Dublin Journal of Medical Science* and quite recently in the *British Medical Journal*. This author, however, not only cites objections, but proposes an efficient substitute. He reports fourteen cases of acute articular rheumatism successfully treated simply by the application of a large blister over the region of the heart. No internal medicine was given, and we are told that pain and fever subsided within twenty-four hours after the application of the vesicant. The author states that he has had a number of other cases with which he had been equally successful in almost every instance.

Dr. Harkin attempts to explain the action of his remedy by assuming that acute rheumatism is "a specific form of endocarditis of neuropathic origin, generally allied with myocarditis." The local disease, he thinks, speedily affects the blood and heat-centres.

Dr. Harkin's pathology is absurd, and would cause some doubts as to his competency as an observer, were it not that on other points he writes lucidly and well.

His view as to the efficacy of blisters is also supported by other observers. Indeed, the blister treatment introduced by Dr. Dechilly, of Vancouleurs, in 1850, has had occasional defenders ever since. Dr. Harkin differs from others in asserting the importance of placing the blister over the heart.

It is known that rheumatic fever often terminates with an early defervescence, even where no medicine is given. For this reason no remedy can be accepted as of assured value upon the limited evidence given by Dr. Harkin and a few others. We are inclined to think also that the profession will be slow in giving up the use of the salicylates. It is pleasant to feel that one can almost surely relieve acute symptoms within twenty-four hours. The sufferer's gratitude and confidence thus earned will generally survive the dolorous period that follows, however long. It is quite possible that the natural salicylate, the oil of wintergreen, which Dr. Kinnicutt has found so efficacious, will obviate some of the objections heretofore made against the manufactured drug.

LIABILITIES FOR INJURY TO PATIENTS DURING OPERATION.

The decision of Judge McAdam, in a recent suit before the Marine Court of this city, brought by Thomas J. Kelly against the dentist Colton, to recover for injuries caused by allowing a piece of tooth, which was being extracted, to drop down the plaintiff's throat while he was under the influence of laughing-gas, is one full of importance, not only to dentists but to general surgeons as well. It is alleged that the piece of tooth slipped from the forceps, and for four weeks thereafter the plaintiff was troubled with a cough until he finally expectorated the piece. The court held that while a patient was under the influence of an anæsthetic which deprived him of the use of his faculties the operator was bound to exercise the highest professional skill and diligence to avoid every possible danger, and in this case it was the opinion of the

court that the circumstances shown were sufficient to carry the case to the jury on the question of negligence.

The judgment appealed from was in favor of the plaintiff for $500 damages, and this judgment was affirmed by the present decision.

The whole question evidently turns on the fact whether or no the plaintiff is guilty of negligence. It is fair to presume, in view of the circumstances of the case, the patient being at the time unable to protect himself, that the full onus of any supposed negligence must be borne by the defendant. In view of this it behooves the operator to exercise extraordinary care to prevent accidents.

It is hardly necessary to say that this is a rule very generally observed by surgeons, and accidents inflicting injury upon patients are in consequence comparatively rare. No reasonable excuse can be offered for neglect to exercise even more than ordinary skill in guarding against such mishaps. The law holds that no person should assume extra responsibility in the management of any case without bringing to the same a corresponding amount of skill to meet emergencies. During anæsthesia there is an implied guarantee to the patient that no known precaution which can be taken shall be omitted to guard against every possible accident. The same holds true regarding every step in any operation, the surgeon being bound to exercise his best judgment, his most watchful care and greatest skill for the benefit of his helpless and trusting patient.

That accidents will happen, despite all precautions to the contrary, is well known and the case under consideration appears to form a striking illustration of the fact. The result of the suit may, however, establish a precedent which is full of danger to any operator who is forced to take extra risks for his patient.

THE INDEX CATALOGUE.[1]

To such as may only know of the "Index Catalogue of the Surgeon-General's Office" by what may be written of successive volumes as they appear, can form no adequate idea of the immensity of labor involved in its preparation, nor of the amount of material upon which such labor is based. For instance, the third volume, just issued, which in size and make-up corresponds with its predecessors, includes over nine thousand author-titles, representing over ten thousand volumes and more than seven thousand pamphlets. Besides these enumerated, there are eight thousand five hundred and seventy-two subject-titles of separate books and pamphlets and nearly twenty-nine thousand titles of articles in periodicals. Thus far the three catalogues include over thirty thousand subject-titles, represent twenty-three thousand volumes, as many pamphlets, over twenty-nine thousand book titles, and over one hundred thousand journal articles. And yet the third volume of the "Index Catalogue" has not advanced beyond D.

The profession of the country who have watched the growth of this grand library at Washington, are becoming more and more alive to its value, and, we are happy to say, are appreciating more and more the genuis and labors of the indefatigable librarian, Dr. J. S. Billings.

These catalogues are making available to the wants of the working medical men an amount and variety of medical literature which has never been collected together in any similar library in the world, nor probably ever will be. We are not surprised to hear that the use of the library is increasing with medical men over the country. Its direct influence in encouraging research must in the end exert its influence upon our medical literature and through it elevate the tone of medical education. We have repeatedly said that the American medical man is as much a worker as the physician of any other country if the opportunities are offered him for so doing. The different volumes of the "Index Catalogue" of this great library are some of the essential means to that end in directing his studies and in indicating to him the proper lines to follow.

In looking through this volume, which is a wonder of work in itself, we are struck with the vastness of the storehouse some of the secrets of which are therein disclosed.

For instance, in it are detailed the works on cholera, climate, croup, diphtheria, diarrhœa, dyspepsia, and dysentery, sufficient in number to make a good-sized library for each disease. In all this, however, but the commencement has been made of what is to be in forthcoming volumes. It is gratifying to know that the fourth volume of this invaluable series including the letter E and part of F is nearly ready and that the first part is going to press.

ACUTE AMERICANITIS.

An ingenious writer in *Knowledge*, an English periodical, relates several cases illustrating the "desiccating" effect of the American climate upon Englishmen who come here. If the visitor be young, and if he settle into hard work, he is very likely to suffer from a train of symptoms which the writer facetiously classifies under the name of "acute Americanitis."

An illustrative case was that of a young man who came over from England and began at once some scientific work at Washington, D. C. He soon got into a condition of nervous excitability, with rapid pulse and a general intensification of mental and bodily activity. He grew thinner, and, finally, symptoms of cerebral congestion, etc., set in. He

[1] Index Catalogue of the Library of the Surgeon-General's Office, U. S. Army, Washington, D. C. By J. S. Billings. Vol. III. Washington, 1882.

was obliged to return to England, where he soon regained his strength.

This is asserted to be an exaggerated, yet typical, case of what often occurs to Englishmen when they cross the Atlantic. New York physicians will doubtless, many of them, recall instances in which English visitors have complained about the peculiar effects of the climate here.

"Nervousness" is a frequent symptom, as is also loss of flesh. Professor R. A. Proctor loses thirty pounds in weight every time he comes to the United States; but regains this flesh very soon, upon his return to England.

The author quoted thinks that the causes acting thus acutely upon Englishmen have been steadily at work upon Americans, producing a development of "constitutional intensification" whose topmost wave is disease, *e. g.*, neurasthenia, American nervousness, or "Americanitis." And the prophecy is made "that American physicians will presently discover this, and recommend their well-to-do patients —those who have worked as only Americans in the pursuit of wealth do work—to turn to the land of their fathers, to breathe the soothing humidities of its anodyne atmosphere, and thereby double the remaining years of their lives."

It may be said regarding this writer's speculations that they betray a lurking attachment to British fogs, which has probably caused some exaggeration regarding the banefulness of our climate and the healthfulness of England. There is, however, a foundation for the view that Englishmen are affected acutely and Americans changed organically by the dryness and other qualities of our climate. This subject has been already noticed by many and has been studied from a larger standpoint by Beard in his work on "American Nervousness."

It is somewhat interesting to see that Englishmen are now themselves discovering and acknowledging this "Americanitis," whose existence they have heretofore been somewhat inclined to ridicule.

THE AMERICAN ACADEMY OF MEDICINE.

THE American Academy of Medicine is an organization having peculiar difficulties in the way of its work and success. It aims to promote preliminary education and to elevate the standing of medicine as a learned profession. These aims are acknowledged to be praiseworthy, but American Academicians, in pursuing them, necessarily enter into a little self-glorification, and excite some feelings of antagonism, if not jealousy. Less than ten per cent. of the profession are qualified to become members. The other ninety scrutinize very closely, therefore, the pretensions of those who claim to have had the proper kind of educational start.

But, despite all obstacles, the American Academy has made a position for itself, and has proved to the profession that its views of the necessity of preliminary training are right. The members have judiciously kept their cause, and not themselves, in the foreground.

These are days when doctors need most of all the capacity to utilize what mental gifts they possess, to judge correctly, and to act with the tact and good sense which a broad education helps to secure. Nothing is so likely to narrow a man as exclusively technical or scientific studies. They make one an artisan, not an artist. To those intending to study medicine, we say, therefore, learn something else well first. And this, we believe, is the gospel which the Academy preaches.

The recent meeting of this Society, of which an account is given elsewhere, was by far the most successful one that has yet been held. About fifty new members were elected, a considerable number of excellent papers were read, and much enthusiasm was shown on the part of everyone. The Society was able to take some retrospective glances and speak of things already done. The reports of the committees showed that much active work is being accomplished by the energetic secretary, Dr. Dunglison.

Altogether the Academy deserves congratulations upon having so securely established its existence and demonstrated its usefulness. As long as there is felt any ambition to have the medical profession a learned body in the true sense, a field for its work will exist.

"A PRIOR CLAIM FOR THE DISCOVERY OF THE BACILLUS OF TUBERCLE."—Dr. J. M. Blaisdell, of Bangor, Me., writes: "Under the above heading in the September 30th number of your journal, you state: 'The only objection to Dr. Blaisdell's claim is that when his article was published he did not say how he discovered his bacilli, nor did he figure them or in any way prove that they were not ordinary bacteria.' Now, I would like to ask the question, if failing to name the bacteria 'bacilli,' or something else, or to give the process by which I discovered them, really invalidates the discovery?

"I distinctly stated in my article on the 'Cause of Consumption,' that 'we were enabled to demonstrate that the "little bodies" seen by Virchow in miliary tubercles, were in reality the minute germs of fungi, which having been inhaled into the tubes with atmospheric air, become imbedded in the mucous membrane, incubating and developing into living parasites.'

"My article was hastily written for a popular journal, and consequently clothed in language that the public could understand. Had it been written for scientific eyes only, I should have used 'bacteria' and other terms, known only to the learned, instead of 'vegetable parasites.' But as the whole family of bacteria and bacilli are included in the general term of parasites—and were first discovered in pulmonary tubercle by myself, and announced (in my opinion) as the cause of consumption, I see not why, in all justice, I should not be accorded the priority in the discovery."

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Annual Meeting, October 23, 1882.

F. R. STURGIS, M.D., PRESIDENT, IN THE CHAIR.

REPORT OF THE BOARD OF CENSORS.

DR. DANIEL LEWIS, Secretary of the Board, read the report, of which the following is an abstract. The registry on May 1, 1882, contained the names of 2,772 practitioners, 476 having been added since the report at the annual meeting in 1881.

About fifty complaints had been received during the year, several of which were for non-registration. In some instances the name of the supposed delinquent had been recorded since the original list was published. All other complaints had been referred to the Counsel for the Board, who had promptly taken the requisite legal action, and the results were given in his report hereunto annexed.

In his inaugural address the President had called attention to some of the defects of the present law, especially the difficulty in procuring evidence sufficient to convict, and also the facility with which offenders could procure diplomas from a certain medical college in the City of New York.

The report of the Counsel showed that the law of 1880 was one under which convictions could be more readily secured than at first seemed probable, and steps had been taken to shut off the supply of diplomas just referred to, which seemed to be ready for delivery as soon as the culprit had paid his fine in the District Attorney's office.

As the result of the suggestion made by the President, and the unanimous opinion of the Board of Censors, a new law was carefully drafted and introduced into the Legislature in the early part of the session of 1882, which more clearly defined the limits of illegal practice, and rendered fraudulent diplomas worthless by requiring the graduates of all medical schools to pass a State examination before beginning to practice. Of course it encountered the active opposition of the college above referred to, and, as the Board regretted to say, received only a lukewarm support from some schools which need have no fear of allowing their work to be inspected by the Regents of the University of the State of New York, or any other tribunal. The bill failed to become a law.

The Censors were firmly of the opinion that such an examination as the bill proposed, was an educational reform, which each member of the Society should advocate until its complete realization. Unless medical men themselves were willing to sacrifice time and money to uphold the character of their calling, the public at large could not be expected to undertake the task. We were not engaged in a crusade against quackery and the suppression of its disciples, but all endeavors to enforce medical laws and punish offenders were the fruitage of a growing sentiment in favor of better methods of medical education. Unqualified practitioners would soon lose what influence they had in the community, if it was demonstrated that a thorough preliminary training and medical attainments equal to those required by the best universities here or abroad were demanded for admission into our ranks.

The report was signed by all the members of the Board: Drs. David Webster, A. Jacobi, Edwin F. Ward, Edward B. Bronson, and Daniel Lewis.

The Report of the Counsel, Edward C. Ripley, Attorney, showed that during the year just expiring, the prosecution of illegal practitioners had been much more extensive than in the year 1881. Of the cases mentioned in his last report, and which had since been terminated, there were *ten*. In five of these the prosecution was successful, and fines to the amount of five hundred dollars were imposed. Two of the number, Edward B. Lighthill and John Wesley Grindle, had since been graduated by the Eclectic Medical College of the City of New York. In two instances the prisoners were acquitted, because of the weakening of witnesses; two were discharged by the justice, because of ignorance concerning the law; and one case was awaiting trial at the Special Sessions.

During the year just expiring, Richard C. Flower was arrested, indicted, tried and fined two hundred dollars; proceedings were discontinued against Abraham E. Cox, who promised to take down his sign and to cease practising; James Bryan had been held for action of the grand jury (and subsequently had been graduated by the Eclectic College of the City of New York), case still pending; Henry Cooper had pleaded guilty and been fined fifty dollars; F. W. Johnson had been held in five hundred dollars bail; Richard Johnson had pleaded guilty, and been fined fifty dollars; Adam Claesson had been held in three hundred dollars bail; Dr. Bond (Dr. Humphrey) had been held in five hundred dollars bail; August Frech in three hundred dollars bail; Moses Jacoby held to bail; F. Eliseo Marini held to bail on a second and third complaint; Richard Johnson held to bail on a second and third complaint, and Nicola Re held for trial.

An important case was that of The People, etc., *vs.* Robert A. Gunn and others. This was an action brought by the Attorney-General to annul the alleged certificate of incorporation of "The United States Medical College." The organizers of that institution attempted to form a medical college under a law that did not authorize it, and claiming to be such had been issuing diplomas and conferring the degree of doctor of medicine. A similar institution in Buffalo had its charter annulled last year by a Special Term decision of the Supreme Court, from which it appealed to the General Term. Pending this appeal, and after this suit against Gunn and others was brought, a bill was passed by the Legislature, by which it was attempted to patch up these illegal institutions by a retroactive act. In the Buffalo case the court decided before the bill became a law. In the case of Gunn and others the question was yet to be decided by our courts whether this "United States Medical College" (admitting that it was never legally constituted), had been made legal by the retroactive effect claimed for the act of 1882. Of the whole number, twenty-seven, of prosecutions instituted and continued, only two had proved unsuccessful. In this work the Counsel had been efficiently aided and supported by the Board of Censors and the President, the several judicial officers before whom the cases had been heard, and last, but not least, the press of New York.

The report closed by directing attention to the fact that there was still a lack of interest in matters pertaining to the medical profession, as evidenced, for example, by the passage at the last session of the Legislature of Chapter 367 at the very closing

hours of the session, without a protest from those who ought to have represented and protected the interests of this Society, the interests of the whole profession, the interests and welfare of the whole people. This bill, couched in obscure language, in which the words "medical college" did not appear at all, and pressed forward for passage only at the last moment, had for its effect nothing more nor less than legalizing a number of unconscionable, illegitimate concerns calling themselves "medical colleges," that were yearly grinding out the Grindles, the Bryans, the Coxs, and men of that ilk, licensed to poison, maim, and kill promiscuously, and pollute the medical profession generally. By some legitimate and well-directed means the medical profession of this State should see to it that proper laws were framed and passed and enforced, and that at each session of the Legislature all bills be scrutinized by some competent authority, and thus prevent a recurrence of the fraud attempted by the act of 1882.

REPORT OF THE COMMITTEE ON HYGIENE.

The Committee on Hygiene, through its Chairman, Dr. E. G. Janeway, presented its annual report, of which the following is an abstract:

The Committee presented first the mortality statistics for the three-fourths of the present year, and for the facts upon that part of the report they were indebted to Dr. J. T. Nagle, Assistant Register of Vital Statistics. The total mortality during this period had been 30,255, an excess of 653 over the mortality for the corresponding period in 1881. The increase in population between 1875 and 1880, according to the census, was 164,691. The excess of mortality in children under five years of age, in 1882 over 1881, was 826. The mortality from small-pox in 1882 was 258; in 1881, 364; in 1880, 6; in 1879, 24; in 1878, 2; in 1877, 14; in 1876, 308; in 1875, 1,098. In the autumn of 1874, and spring of 1875, was initiated systematic vaccination by the Board of Health, and the facts recited spoke more forcibly of the value of the system than could any long dissertation. From January 1, 1882, to September 30, 1882, the number of primary vaccinations performed by the Board of Health was 14,067; re-vaccination, 77,466; total, 91,533. The report continued with statistics concerning measles, scarlet fever, diphtheria and croup, typhoid fever, typhus fever, diarrhœal diseases, pneumonia, bronchitis and phthisis. The statistics showed that there had been a marked increase in the mortality.

While it was only 653 greater than last year, it was 10,041 greater than in 1877, and 6,386 greater than in 1880. The comparison of absolute figures, however, was incorrect, and the rate of mortality should be contrasted with the increase of population. The annual increase from the year 1875 to 1880, which was made the basis of calculation by the Board of Health, was 2.98; and, according to that, the present population of the city of New York was 1,279,560. The increase of mortality had been mainly referred to under the diseases already classified, namely: scarlet fever, diphtheria, small-pox, typhus fever, pneumonia, and phthisis. There were six more deaths from diarrhœal diseases in 1880 than in 1882. These combined diseases caused a little less than one-half of the mortality, but were responsible for sixty-three per cent. of the increase. It was probable that the mortality statistics for next year, and for the remainder of this year, would be much more favorable. The diseases already mentioned exhibited, in the tables accompanying the report, periods of activity and decline. These were by no means so marked as in Philadelphia, where, in periods of four and five years, the disease trebles or quadruples its ordinary victims. This difference had been noticed in all large cities, and probably depended upon the epidemic years, so to speak, having consumed so much of available material.

It was noticed that typhus fever occurred this year the same as last year. The same measures employed last year were again used by the Board of Health with success. The changes brought about by last year's outbreak, as regards the rules concerning lodging-houses, together with a knowledge of those most likely to be affected, assisted in reducing the number of those attacked by the disease; so that the deaths numbered 63 this year, as compared with 154 last year. This winter promised to be a cold one, and if the poison should lurk somewhere, or be again introduced, the disease might spread with greater virulence. The committee therefore advised the physicians of this society to report doubtful and confirmed cases promptly to the Board of Health, should such fall under their observation.

Typhoid fever had occasioned fewer deaths than during last year, and than in 1872 and 1875. Thanks to the purity of the Croton, the application of disinfection to the discharges, the rules adopted by the Board of Health requiring privies to be emptied and disinfected at places where typhoid occurs, the disease showed, according to statistics, less absolute fatality than in the periods between 1860 and 1870. The chairman of the committee suspected that a part of the large mortality from this cause during those years was due to the confusing typhus with typhoid fever.

The figures for diphtheria showed a decrease of 411 deaths as contrasted with last year, and an increase of 504 and 794 as compared with 1880 and 1879. The committee believed this disease to be contagious to a greater extent than many physicians had entertained, and also that the poison adhered at times with tenacity to articles of clothing. When faulty sewerage existed, its intensity and spread were increased. Each case demanded isolation, disinfection of excreta and of the room occupied by the sick, as well as of the clothing, etc., etc., in the room.

Those who believed that pneumonia was only due to exposure to cold must be struck by having the mortality seventy-one greater during the first quarter of 1882 as compared with the last. They might, perhaps, derive more comfort from a comparison of the second quarter, during which 240 more deaths occurred than in last year. Bronchitis had also occasioned 87 more deaths in the first and 50 in the second quarter of this year than during the same periods in 1881. On the other hand, it could not be denied that our streets were dirtier to a marked degree last year than during the present. Any one who would study this problem carefully must be struck by the difficulty of explaining this fact, if isolated, in relation to the etiology of the disease.

With reference to the adulteration of milk, each year the Legislature had passed a bill permitting the watering of milk, which, but for the action of the Governor, would have become a law, seriously interfering with the activity of the Board of Health in that respect. The chairman of the committee had felt called upon to aid the Board of Health in preventing the passage of an act permitting the sale

of skimmed milk. The existence of such an act, no matter how carefully guarded, would open the door to great evil. Skimmed milk meant the sale of milk liable to become sour, if not already so; it meant milk from which much of the nutriment had been removed. The few persons who needed it could skim it for themselves, and find uses in the household for the cream. The committee hoped that the incoming Legislature would not dabble in this matter. If they should, it was asked that the president of the Society and the chairman of the Committee of Hygiene be empowered to act in their best discretion in aiding the Board of Health in opposing any measure which increases the liability of the sale of poor or adulterated milk in this city.

The Committee also included plumbing and tenement-house laws in the suggestion above made, with reference to legislative interference.

The Committee summed up the sanitary needs of the city under the following heads:

First.—An increased supply of Croton water. The want was appreciated by all except those who had the high-pressure service. The city needed a new aqueduct upon the following conditions, which should be placed upon a sure basis by a legislative act authorizing the construction of the work: (*a*) Every dollar spent should represent a dollar's worth of work; (*b*) a rigid inspection by competent men who should prevent bad work; (*c*) continuous and equal employment of men in the service from the inception until the completion. It was not desirable to have a large force employed about election time, as had been too frequently the case with public improvements. The responsibility for and the sole charge of this work should be vested in a man or men of such character as to insure honesty in conception, in execution, efficiency, and promptness.

Second.—A better system for the disposal of refuse.

Third.—A change in the sewers so that the present accumulation in the slips would be prevented. The proof that this accumulation is the cause of wide-spread or specific sickness was not obtainable, if it existed. The germs which the sewage might contain were as a general rule prevented, by its dilution with water and its emanations with air, from performing their specific work. The evil, however, was one which would increase with the growth of the city, and might in the future become of vital importance. That the accumulation of refuse matter was a nuisance, both from its effect upon the sense of smell and on account of the necessity for frequent dredging, was a matter easy of demonstration. The Committee suggested that the Society request through a communication to the present and incoming mayor that this subject should receive thoughtful consideration and proper action.

Fourth.—Adequate measures for dealing with districts which had become too densely populated, or in which evils existed which could not be remedied by proceedings against individual owners and houses.

Fifth.—Proper hospitals for the isolation of contagious diseases, which, from their acuteness and the risk attending them, were not adapted for transportation to Blackwell's Island or to North Brothers Island.

Sixth.—Should the new district require parks, as was proposed last year, it seemed to the Committee essential that we should advocate several rather than one large park, inaccessible to many of the future residents. A great need existed in the crowded portions of our city for such parks, and the Central Park did not meet the necessity.

THE PRACTITIONERS' SOCIETY.

Stated Meeting, October 6, 1882.

DR. JAMES B. HUNTER, PRESIDENT, IN THE CHAIR.

A PAPER was read by DR. FRANK P. KINNICUTT, entitled,

THE OIL OF WINTERGREEN AS AN EFFICIENT SALICYLATE IN ACUTE RHEUMATISM.

[The paper is published in full elsewhere in THE RECORD.]

The discussion was opened by DR. T. A. MCBRIDE, who said that he had not used the oil of wintergreen in acute rheumatism, but he had employed it in

MUSCULAR RHEUMATISM,

and also in some cases of subacute articular rheumatism. In these conditions it had answered better in his hands than any other remedy. In lumbago he had before been accustomed to use chloride of ammonium, in combination with perchloride of iron, but he had found the wintergreen would act even better. It promptly relieved acute lumbago in a day or two, and even chronic lumbago was improved in a short time. It was the best remedy, he thought, for pure rheumatic lumbago. He could endorse the remark of Dr. Kinnicutt that the drug should be continued for some time.

The method which he found best for administration of the drug was in capsules with magnesia. The dose was ten minims, usually every four hours. He had never seen any unpleasant results from its use. A dose of twenty minims taken by mistake caused no harm. A case of rheumatic headache—one of the very few he had ever seen—was relieved by the same drug.

DR. BEVERLEY ROBINSON had had no experience with wintergreen. He referred to the subject of the endocardial murmurs described by Dr. Kinnicutt. Such murmurs more often indicate anæmia or a relaxation of the heart-fibre (acute dilatation) than any endocardial disease. He thought that earlier writers had inferred endocarditis too frequently from these murmurs. It probably does not accompany acute inflammatory rheumatism so often as has been supposed.

With regard to the anæmic bruits, he was inclined to think that some were heard just as well at the apex as at the base of the heart.

DR. KINNICUTT quite agreed with the last speaker as to the pathology of the murmurs. In his opinion the murmurs heard in four of his cases were due to an anæmia, brought on by the disease or by salicylic acid. There was always some anæmia associated with acute rheumatism. He thought that hæmic murmurs were quite as frequently heard at the apex as at the base.

He had no reason to believe that the oil of wintergreen protects the heart any more than other salicylates. It is the general opinion now that the salicylates do not lessen the frequency of heart complications.

He began treatment by giving the oil in doses of ten minims every two hours. The capsules, when taken frequently, are apt to nauseate, and so he preferred giving it floating on water or milk. An advantage to be much prized was its pleasant flavor, in contrast with the nauseousness of the salicylates. Its cost was less by almost one-half also, if bought pure and not put in large mixtures.

As to its elimination, in one hour after it is taken

it can be discovered in the urine. As to its antiseptic effects, urine passed within an hour after a dose of twenty minims will remain free from decomposition for twelve days. Ordinary urine will decompose in two or three days. It would seem that the drug might be of some value in

CYSTITIS,

and there are already reports of trials in this direction.

The speaker had used the oil in a number of other diseases than rheumatism, and got the same effects as were obtained by salicylic acid. He had seen no toxic effects from it.

The urine had been examined in all his cases, but no trace of albumen was found. The statistics of results which he had given made a little better showing than those usually given for the salicylates. He knew of no element of error in his reports, though the cases were very carefully nursed and watched.

DR. H. F. WALKER said that a great deal of the oil in the market was made from petroleum, and not from the herb itself—a fact to be remembered.

DR. R. F. WEIR said he had had no experience with the oil of wintergreen—except in candy.

DR. WM. M. POLK said, with regard to the toxic effects, that a boy, nine years old, took by mistake half an ounce of the oil. It caused severe vomiting, and purging, hot skin, rapid pulse, slow respiration, and dulness of hearing. After a dangerous illness of two or three days, he recovered.

DR. GEORGE F. SHRADY reported a case of

SUCCESSFUL TRACHEOTOMY FOR DIPHTHERIA IN AN INFANT ELEVEN MONTHS OLD.

[The case is reported in full on p. 512.]

The paper being open for discussion,

DR. ROBERT F. WEIR said that he had done the operation several times in children under two years of age, but never had had any recoveries. But a very few of such recoveries were on record.

DR. WM M. POLK referred, in connection with the after-treatment of these cases, to the trouble and danger caused by

INSPISSATED MUCUS.

He had operated on a child about two years old suffering from catarrhal croup. The conditions were as favorable as possible, but the child suffered from repeated exhausting attacks of obstructive dyspnœa due to the mucus. These were relieved as completely as possible by removing the mucus, but the patient died, evidently from exhaustion.

DR. WEIR said that removal of the inner tube did not always clear out the outer tube. It was a good plan to pass something through the latter, or even to swab it out, and to let saline solutions trickle down from time to time.

DR. SHRADY said that in the case reported there was no trouble from occlusion until the seventh day, when it was necessary to take out both tubes. This was done again two days later.

DR. SHRADY had tried to keep a moist sponge over the trachea, but to no purpose.

DR. KINNICUTT had been accustomed to use an alkaline spray, and he thought it beneficial, although he recalled a case where nothing seemed to prevent the inspissation of mucus and obstruction except the use of a syringe with a catheter attached. This was passed into the trachea and the mucus sucked out.

DR. WEIR said that he had applied his mouth to the trachea once, and had gotten diphtheria. Now he used a syringe for the purpose.

DR. HUNTER had employed the long syringe used for removing secretions from the cervix. This had answered well.

DR. WEIR referred to the present tendency to do away with the trachea-tube, and mentioned the fact that in opening the trachea and drawing its sides apart there was a protrusion of the posterior wall which had a very deceptive appearance, and had even led surgeons to cut into it. It had been suggested that a portion of the tracheal wall be snipped out. This procedure was asserted to lead to stenosis, however.

DR. POLK referred to a statement that children who have been operated on for tracheotomy do not live beyond the age of sixteen or seventeen, on account of

TRACHEAL STENOSIS

and consecutive lung trouble.

DR. WEIR recalled two cases that had safely passed that age.

DR. BEVERLEY ROBINSON said that he had successfully performed tracheotomy in a child twenty-two months old.

With regard to the use of the spray, he said that he had been in the children's hospital in Paris during an epidemic of diphtheria, when tracheotomy was frequently performed. He never used a sponge, or inhalations, or spray. Subsequently, he was at the London Hospital, where all these appurtenances were employed, but he had not been able to see any difference in the results.

DR. KINNICUTT remarked that the statistics of the London Hospital were the best, as regards recovery, of any published.

AMERICAN ACADEMY OF MEDICINE.

Seventh Annual Meeting, held at Philadelphia, Pa., October 26 and 27, 1882.

TRAILL GREEN, A.M., M.D., PRESIDENT, IN THE CHAIR.

BETWEEN thirty and forty members of the Association were present, including Drs. C. R. Agnew, George M. Beard, L. Duncan Bulkeley, F. D. Lente, Henry O. Marcy, John B. Roberts, Howard Pinkney, Edward G. Bermingham, E. H. M. Sell, Benjamin Lee, R. L. Sibbett, and others.

About fifty new members from various parts of the country were elected.

DR. ELISHA HARRIS, of New York, read a paper entitled

PUBLIC HEALTH SERVICE IN ITS RELATION TO THOROUGH PREPARATION OF THE PHYSICIAN.

The speaker said: The rapid increase of public interest in health questions and local sanitary government has put to the test the best talents and educational equipment of medical men as the officers and counsellors of Boards of Health, as well as the physicians to families and individuals. The experience of numerous committees is continually demonstrating that the majority of practising physicians so fail to prepare and outfit themselves in the natural sciences, in habits of accurate and studious observation and medical logic, and in mastering the stores of knowledge, that they are not adequately educated for the highest duties of public sanitary service.

It is creditable to the best of our local medical officers and others, who are called to advise in communities for the prevention and control of disease, that they faithfully examine their own stores of scientific and professional knowledge in various branches and make use of its resources, and it is creditable to local and State boards of health that the best of them require and encourage the uses of such knowledge, and are also found aiding its increase and development.

The time and cost of the disciplinary course of study are never a waste, and the acquisition of science and of the essential habits of scientific study will become the wealth which the sanitary counsellor and health officer must need, for, as the writer remarked when inducted into the American Academy of Medicine, the faithful physician soon finds that science turns to duty, and that the toiler in science becomes the saver of men.

Much observation and experience in the wants of boards of health and of sanitary government generally leads the writer to urge the duty of thorough preparation for public health service by the most complete general preparation for undertaking the final medical curriculum. Observation warrants the conclusion that nothing less than this will lay foundation for the complete outfitting of the successful officer of public health.

NECROLOGY.

Dr. Richard J. Dunglison reported that, since the organization of the Academy, three of the Fellows had died—Dr. Lenox Hodge, James M. Shearer, and William Henry Allen—and appropriate action was taken to honor their memory by placing on the minutes a record of their literary, professional, and scientific attainments.

Dr. Benjamin Lee then read a paper, the title of which was "Advantages of a Liberal Education Preliminary to the Study of Medicine, as Illustrated in the Early History of Medicine of the Commonwealth of Pennsylvania."

The paper was largely historical and contained many facts of interest to the student of local history, as well as to medical teachers. The prominence taken in Pennsylvania by physicians who had had a preliminary educational training was illustrated.

Dr. H. O. Marcy, of Boston, read a paper on the

BEST METHODS OF TREATING OPERATIVE WOUNDS.

The paper contained the results of a study of the various antiseptics and of the value of antiseptic dressings.

Dr. Lewis H. Steiner, of Frederick City, Md., then read a paper in defence of the purposes of the American Academy of Medicine, it being a reply to a recent criticism by a college professor. Dr. Steiner's paper was admitted to be an admirable answer to an uncalled-for attack.

Dr. George M. Beard, of New York, read a paper on

MEDICAL EDUCATION AND THE MEDICAL PROFESSION IN EUROPE.

The following are some of the speaker's conclusions, reached after considerable study during several visits abroad:

First.—The best system of education in Europe, including both preliminary and medical, is found in Germany. The German physicians are the best educated physicians in the world, both in general and special training.

Second.—Next to Germany comes France, where, as in Germany, it is impossible to get a medical without a more or less thorough preliminary education. In Great Britain less preliminary education is required for medical students than in any of the great European nations. The special defects in the English system are, in addition to deficient preliminary education, these two: First, too little instruction; second, too much examination. It is estimated that only a small per cent. of the English physicians are graduates of Oxford and Cambridge.

If a student must economize in time or means, let it be in the professional and not the academical training. Lengthened terms of medical study will not alone very greatly raise the character of our profession.

Medical books, especially recent cyclopædias and monographs that are not needed by medical students, have a much smaller sale and are less read in America. "Ziemssen's Cyclopædia," which in this country sold by thousands, in England only by a few hundreds. German and French monographs have comparatively a limited circulation in England as compared with this country.

The Staats Examen (state examination) is one of the glories of Germany. Its chief temptation is to be just.

Whence comes now this enormous and towering superiority of Germany in medical education that draws unto itself all nations from afar?

First of all, the Germans are thinkers, philosophers, men of abstract ideas, with inherited genius for theory and for language. In Germany nothing counts but originality. Unless a man say something or do something different from what has been said or done before, he may as well be silent and quiet.

Germany is a great medical centre, because it is a great thought centre.

The defects of Germany are mainly on the side of practical application of science and philosophy to daily wants. In medicine the special great defect is in the treatment of disease; the Germans are nontherapeutists.

The sceptre of science and ideas first appeared in Italy, thence passed to England, then to France, and from France to Germany, and from Germany is destined to pass, partly in the Germans themselves, to our own country.

In comparing the psychology of races and nations Mr. Arnold finds the English wanting in lucidity—another phrase for abounding in timidity.

The social state of the profession in Europe is a reflex and reward of its education and character. The profession as a profession has slight honor, the position of its individual members come from individual character despite the calling.

The practical applications of this inquiry to the future of medical education and the medical profession in this country are these:

First.—In every way and at all times encourage young men, aiming for medicine, to acquire university education in the very best of our universities.

Years since, when I was a student of medicine, I prepared statistics comparing the three professions in regard to preliminary education; these were, I believe, the first statistics on this subject that were published in this country. They appeared in the *New York Medical Times* and the *Yale College Courant*. By these statistics, out of every ten clergymen of every denomination seven were college graduates; the proportion being less with the Methodists than in any other denomination. Out of ten lawyers five were

college graduates. Out of ten physicians one was a college graduate. There is at present, I judge, some improvement, at least in the Eastern part of the country, in the preliminary education of physicians.

Second.—Encourage young men to study and travel in Germany.

Outside of a small circle of German-taught experts the medical literature and the medical practice of England is from five to fifteen years behind Germany and America.

Third.—Encourage young men to do original creative pioneering, both in medical philosophy and medical experiments.

America within two decades has pushed forward, largely under German inspiration and encouragement, at least a century.

At the evening session the members listened to the

ANNUAL ADDRESS

by the President, Traill Green, A.M., M.D., LL.D., of Easton, Pa. After some retrospective remarks he said: Early in our work we showed that there was a decided belief in the mind of the profession that a better preliminary education was needed. Every youth, previous to his having been engaged in a course of medical studies, should be properly qualified by a suitable preliminary education in classical and mathematical learning. One of the greatest obstacles to the improvement of medical education in this country is the deficiency of sufficient preliminary education in those who enter the profession. It is well known that but a very small proportion have had such previous training as is absolutely necessary in order to begin with advantage the study of a science. Many have barely had the common education of our public schools, and some even this in an imperfect manner. Such men have not yet learned how to learn, and yet they start at precisely the same point, and are required to go through the same course of study as those who have undergone the discipline of a college education. In our utilitarian age the study of the classics is discouraged, because they do not obviously tend to increase the amount of "daily bread" in any given community. That they conduce to mental vigor, and prepare the mind for professional pursuits, and lead to those refinements of thought and delicacies in sentiment and action, so essential to the physician, is not a matter of sufficient importance to counterbalance the loss of time expended in their pursuit. The education of physicians has not kept pace with that of theologians, or even lawyers, and our profession has so far lost caste as scarcely to deserve to rank among the learned.

Referring to the

PROGRESS OF THE ACADEMY,

he said: Our society has made constant advance. From year to year we have associated with us in the Academy distinguished practitioners and eminent teachers—men who are moved by love to their profession to carry on this reform—men who are not disposed to retrace their steps. Abundant evidence can be furnished to show that the Academy occupies a position which is approved as the only ground on which we can hope for progress as a profession.

In 1876, the year of our organization, we believe the medical school of Harvard was the only school in the country which required a preliminary examination of intending medical students; now there are thirteen colleges which require the diplomas of a literary institution as a preliminary examination—one of the thirteen is not a regular school.

It would be well for the profession and for the people if none were accepted as students of medicine who had not graduated from a reputable college, or at least from a good high school.

There should be a thorough preliminary examination before a board of examiners prior to matriculation, or the student should be required to possess the diploma of A.B. It is well known that the proportion of the graduates of medical schools who pass the army board is one-fourth of the number who apply.

We think it is safe to say that since the organization of the Academy there have been such advances made in public and professional sentiment as encourage all who are interested in the progress desired. May it be our purpose so to impress the minds of young men who are looking to the medical profession as the field of their labor, that their experience may be that of cultured scholars and skilful physicians, whose lives may be useful and adorned by the liberal culture to which we invite them.

SECOND DAY'S SESSION.

After various reports, the following officers were elected for the ensuing year: *President*—Dr. Henry O. Marcy, Massachusetts; *Vice-Presidents*—Drs. George M. Beard, New York; William Elmer, Bridgeton, N. J.; Cornelius R. Agnew, New York; Thomas M. Drysdale, Philadelphia; *Secretary and Treasurer*—Dr. R. J. Dunglison, Philadelphia; *Assistant Secretary*—Dr. Charles McIntire, Jr., Easton, Pa. Drs. James M. Barton and Thomas B. Reed, of Philadelphia, were elected Fellows of the Academy. Drs. Henry Frazer Campbell, of Georgia, and Austin Flint, Sr., of New York, were elected to honorary membership.

DR. NATHAN ALLEN, of Lowell, Mass., read a paper on

THE INFLUENCE OF MEDICAL MEN.

Dr. Allen showed how earnestly medical men were now striving to investigate the causes of disease. They ought to follow up this branch of work. They could prevent by careful education, training, and watching what could never be cured with drugs. The influence of medical men should be exerted in this direction now.

DR. R. L. SIBBETT, of Carlisle, Pa., read a paper on the

PERCENTAGE OF COLLEGE-BRED MEN IN THE MEDICAL PROFESSION.

The reader had collected a very large number of statistics on this subject.

Among the 222 members of nine County Medical Societies, in New Jersey (6) and Pennsylvania (3), the per cent. of A.B.'s was 12.6; the per cent. of those having had no college training at all was 80.2.

Among the 58 American colleges he had collected records of graduates extending back in many cases to 1820 or 1825. The total number of graduates was 38,054. Of these, 9.2 per cent. studied medicine; 21 per cent. theology; 19.7 per cent. law. Some of the figures are as follows:

No.	Name of College.	Classes.	Whole No.	Medicine.		Theology.		Law.		Remarks.
				No.	Per ct.	No.	Per ct.	No.	Per ct.	
1	Harvard	1636-75	3,913	449	11.5	349	9.0	537	13.7	Law LL.B.'s only.
2	Yale	1836-75	4,575	398	8.7	1,012	22.1	474	12.3	LL.B.'s only.
3	Brown	1826-75	1,476	112	7.6	460	31.2	73	5.0	LL.B.'s only.
4	Bowdoin	1826-75	1,489	155	10.4	294	20.0	...	...	
5	Amherst	1822-75	2,168	179	8.2	923	42.6	293	13.5	
6	University of Vermont	1836-71	665	43	6.5	149	22.4	323	48.6	
7	Tufts	1857-80	254	19	7.5	30	11.8	...	...	
8	Williams	1836-75	1,513	168	9.2	556	30.7	430	23.7	
9	Union	1836-67	3,148	338	10.6	711	22.3	963	30.3	
10	University of City N. Y.	1853-78	599	65	10.9	47	8.0	148	24.7	
11	University of Rochester	1851-78	638	37	5.8	216	33.7	126	20.0	
12	St. Francis Xavier (N. Y.)	1855-77	270	15	5.5	101	37.4	41	15.2	

Two tables compiled from Reports of the Commissioners of Education show the comparative proportions of college-bred men in medicine, law, and theology.

TABLE I.

Professional Schools.	Report for 1879.		Report for 1880.	
	No. Reported.	Per ct. of those who have a degree in Arts and Science.	No. Reported.	Per ct. of those who have a degree in Arts and Science.
Medicine	9,522	8.2	9,876	7.9
Theology	4,362	30.6	5,093	26.4
Law	3,018	25.2	3,134	24.1

TABLE II.

	Report of 1879.			Report of 1880.		
	Medicine.	Theology.	Law.	Medicine.	Theology.	Law.
Whole number of schools reported	68	133	49	72	142	48
Number reporting *no students* at all	2	10	6	5	9	4
Actual number on which to base statistics	66	123	43	67	133	44
Number making no report of degrees in arts and science	39	53	19	37	68	18
Percentage of whole	59.1	43.1	44.2	55.2	51.1	41.0
Number of students reported by these schools	5,614	2,092	1,218	5,379	2,537	768
Percentage of whole	60.9	48.0	40.8	53.6	49.9	24.5
Percentage of students in the schools reporting degrees in arts and science, who have such degrees	20.0	59.0	43.0	16.9	52.6	32.0
Percentage in Table II	8.2	30.6	25.2	7.9	26.4	24.1
Ratio in Table I	1	3.3	3	1	3.5	3
Ratio in Table II	1	3	2.15	1	3.1	1.9

In a discussion on

REGISTRATION OF PHYSICIANS,

Dr. Sibbett said that Philadelphia was the home of quackery, and the city of Philadelphia had done a great deal to disgrace them. Over six thousand physicians have registered, eight hundred and thirty-eight without diplomas. He then read a supplement to the registration act to be passed by the Legislature in case of the establishment of a State Board of Health. It gives the Board of Health the power of receiving the registration of all practitioners of medicine and surgery.

DR. CORNELIUS R. AGNEW, of New York, said there was some discouragement in his State with regard to laws for the prevention of irregular practice.

The Society adjourned to meet in New York in September, 1883.

Correspondence.

THE ELECTRIC BATH.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In an editorial article of your issue of October 7, 1882, headed "The Electric Bath," I find the following words: "What is needed, however, is further careful clinical records which shall tell the failures, as well as successes, from this treatment. The former, we fear, as in electro-therapeutics generally, will not be rare." Apparently in response to your remarks, Dr. Hutchinson, of Providence, sends you a communication, which you publish in your issue of October 21st. His opinion of the bath does not appear to be the most exalted. He candidly admits, however, that "it is quite possible that some details of operating may have been neglected which longer perseverance would have taught." Now, while I hold with you that failures are not rare, I insist that, cases being chosen where proper indications exist, this treatment will compare more than favorably with any and every other non-specific remedy. The chief difficulties encountered by Dr. Hutchinson were: (1) *Frequent systemic depression following immersion of the entire body in water for, say, fifteen minutes, from which enfeebled persons would sometimes not rally for hours.* With respect hereto I will simply say that an ordinary warm bath will in such persons be followed by similar results, and that therefore the treatment is, for the very reason stated, contraindicated in such cases. (2) *The fatigue from completely undressing and dressing was often considerable, and often objected to.* I can scarcely look upon this as a valid objection. The same would apply, with equal force, to any and every other kind of baths. (3) *A sensation of chilliness is common, followed by a stroke of cold.* This is a difficulty I myself experienced in the beginning, but soon learned to overcome. It is due to the lying perfectly still for from ten to twenty minutes in a medium that is of considerably lower temperature than the human body. When persons take an ordinary bath, they are, as a rule, constantly on the move, washing themselves, etc. Were they to lie still for fifteen minutes in a bath of 80° F. (the temperature used by Dr. Hutchinson), the results would be such as the doctor obtained. After a brief experience I had the bath-water prepared of a temperature of 92° F.—a few degrees more or less in in-

dividual cases. I also had the patient stir about some in the tub for about a minute before leaving it, and finally applied a more or less cool douche before submitting the patient to the drying process. Then a good rubbing down with a moderately coarse towel, and chilliness was a thing of the rarest occurrence.

There were administered from October, 1873, to April, 1878, either by me or under my immediate supervision about four thousand electric baths, whereof 3,311 are recorded. In local electrical treatment my experience has been still larger. I have therefore had ample opportunities to make comparisons and draw deductions, and can conscientiously say that, in my estimation at least, there is no one other particular method of applying either the galvanic or faradic current that has so wide a range of application or so few therapeutic failures to record as the electric bath. Failures that have their cause in imperfect administration should not, in justice, be admitted to the statistics of any therapeutic plan or method.

Respectfully yours,

GEORGE M. SCHWEIG, M.D.

315 EAST FIFTY-EIGHTH STREET, NEW YORK.

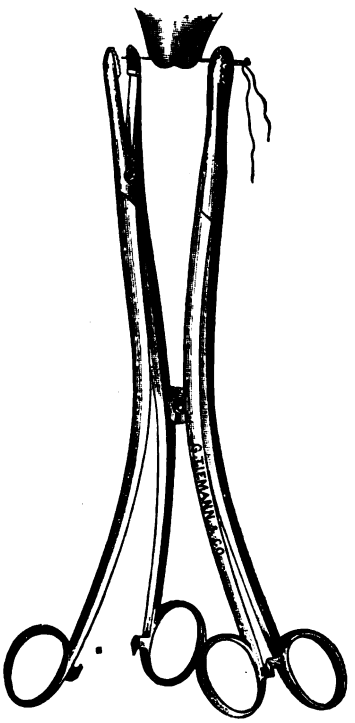
New Instruments.

COMBINED NEEDLE-FORCEPS.

BY C. A. VON RAMDOHR, M.D.,

INSTRUCTOR IN GYNECOLOGY AND OPERATIVE MIDWIFERY, NEW YORK POST-GRADUATE MEDICAL SCHOOL.

IN operating for lacerated cervix a great deal of time is occupied in passing the sutures. Usually the



needle is first passed through one lip, extracted, introduced into the other one, and extracted again. The reason for this manœuvre is that it is the harder to catch the point of the needle with the extracting forceps the more it is imbedded in the surrounding tissues; and in passing the needle through both lips at the same time, it will always leave the point more or less deeply imbedded.

Any simple contrivance enabling the operator to pass a needle through both lips at the same time, and extracting it without difficulty, thereby shortening the time of the operation, is well worthy of consideration.

The above combined needle-forceps answers such a purpose. It consists of a pair of needle-forceps which may be united or separated by a pivot and notch lock at their middle.

The *modus operandi* is as follows: A straight needle (Pallen's trocar, pointed by preference, longer or shorter according to the thickness of the denuded cervix) is clasped at a right angle in the right-hand (pivot) forceps. It is pushed through both lips, then the open left-hand forceps (notch) is hooked on the pivot and the open branches are pressed against the cervix until the point of the needle lies, as it always must lie according to the construction of the forceps, between the branches. The left-hand forceps is then closed and the right one opened and withdrawn, and the point of the needle grasped by the left forceps is extracted.

In this way I have been able to pass four sutures in a unilateral laceration inside of four minutes, certainly not very slow time.

The instrument is manufactured under the above name by Messrs. George Tiemann & Co., of 67 Chatham Street.

105 SEVENTH STREET.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 21, 1882, *to October* 28, 1882.

TURRILL, HENRY S., Captain and Assistant Surgeon. Assigned to duty at Fort Omaha, Neb. S. O. 112, par. 3, Department of the Platte, October 23, 1882.

WYETH, M. C., First Lieutenant and Assistant Surgeon. Will be relieved from duty at Fort Meade, D. T., upon his return from detached service and will proceed to Fort Yates, D. T., and report to the Commanding Officer of that post for duty. S. O. 172, Department of Dakota, October 19, 1882.

KANE, JOHN J., Assistant Surgeon. Leave of absence granted October 9, 1882, Department of the Missouri, is extended two months. S. O. 247, par. 3, A. G. O., October 23, 1882.

BANISTER, JOHN M., First Lieutenant and Assistant Surgeon. The leave of absence granted by par. 5, S. O. 203, Department of the Missouri, October 10, 1882, is extended one month. S. O. 113, par. 2, Military Division of the Missouri, October 23, 1882.

WILSON, GEORGE F., Assistant Surgeon. Is relieved from duty at Vancouver Barracks, W. T., and assigned to duty at Fort Townsend, W. T. S. O. 148, par. 1, Department of the Columbia, October 6, 1882.

OWEN, WM. O., JR., Assistant Surgeon. Is relieved from duty at Fort Townsend, W. T., and assigned to duty at Vancouver Barracks, W. T. S. O. 148, par. 1, Department of the Columbia, October 6, 1882.

BUSHNELL, GEORGE E., First Lieutenant and Assistant Surgeon. Extension of one month's leave of absence is revoked. S. O. 247, par. 2, A. G. O., October 23, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 28, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Oct. 21, 1882.	0	44	33	3	9	40	0	0
Oct. 28, 1882.	0	31	20	3	9	42	1*	0

* This man was picked up in the street. Came from Cornwall, N. Y., W. S. R. R.

THE YELLOW FEVER.—A very remarkable decrease in the number of yellow fever cases at Pensacola, Fla., was reported on October 29th. The number was only nine, with one death. On October 30th the number was nineteen. It is hoped that the force of the epidemic is spent.

Official reports from Pensacola have been received, showing that 2,079 cases of yellow fever and 172 deaths occurred up to and including October 25th.

At Brownsville, Tex., there are 26 cases and no deaths reported for the week ended October 28th, making the total number of cases during the prevalence of the epidemic, 1,977, with 114 deaths. The epidemic is considered practically at an end in this place.

DR. EZRA B. BENNETT, who died at Danbury, Conn., on October 27th, was one of the oldest physicians in Connecticut, having been in active practice for nearly fifty-five years. During his whole career he had been especially interested in surgery. He was the pioneer in Connecticut in operating for ovarian tumor, vesico-vaginal fistula, and club-foot.

DR. EDMUND GRINDAL RAWSON, an old and highly respected physician, died last week at his residence, in this city, at the age of seventy-eight.

THE LATE DR. JAMES B. REYNOLDS.—At the stated meeting of the New York Pathological Society, held October 25, 1882, the committee appointed to prepare resolutions on the death of Dr. James B. Reynolds made the following report:

"The Pathological Society of New York, having heard with unfeigned regret of the death of Dr. James B. Reynolds, for twenty-four years one of its most valued members, directs this minute to be entered upon its records:

"In the death of Dr. Reynolds we recognize the loss of one who was endeared to the profession by his courteous deportment, his high professional attainments, and the zeal which he displayed in the cause of medical education and progress.

"By his clinics in pædiatrics, which were given weekly as long as his health permitted, he supplied a want long felt in the curriculum of medical teaching, and the loss of instruction given by him in this important branch will be keenly felt by students and practitioners.

"The Society extends to the bereaved family of Dr. Reynolds the assurance of its profound sympathy, and directs this notice to be published in the medical journals of New York.

"CHAS. C. LEE,
"J. L. SMITH,
"J. J. HULL,
} Committee."

INVESTIGATING AN ASYLUM.—The Grand Jury has begun an investigation of the management of the Lunatic Asylum on Ward's Island. In view of the number of persons recently pronounced sane and released from the asylum, it was decided to investigate the institution, and especially the case of William J. Hamilton, who was released a short time ago, after having been incarcerated for six years. Hamilton states that he was sent to the asylum after having been arrested for breaking a pane of glass, and was perfectly sane.

MURDER OF A PHYSICIAN.—Dr. Edward Evans, a young physician of Nicholasville, Ky., was shot and killed on October 26th, by a young lawyer, in a dispute over a fee.

WARM BLOOD BATHS.—Among the modern novelties of medical practice, I noticed, a few days ago, an advertisement, in the Rue de Flandre, of warm blood baths, after a new patented system, in the immediate vicinity of the abattoir. From the wording of the advertisement I infer that hereafter there will be "no more anæmia, no more paralysis, gout, rheumatism, chest affections, or rickets." The blood is said to be perfectly liquid, being defibrinated and preserved at the natural temperature. — *Cor. of College and Clinical Record.*

UNION OF WOMEN.—An organization, called the Union of Women of France, is in existence, having for its object the aid of the wounded in time of war, and of those who have been injured by public disasters. In the annual report of this association, recently presented at a general reunion, the services rendered by this useful body in Algiers, Tunis, Boulogne, and other places, were alluded to. Practical courses have been organized for the pupils of the Union.

A QUARANTINE QUARREL.—The Southern health authorities do not get along very amicably. The State Health Officer of Texas announced to the President of the Louisiana Board of Health that, owing to continuance of yellow fever, the Governor would extend the quarantine until cold weather set in. As Louisiana intended to raise its quarantine November 1st, Texas would, after that date, quarantine against New Orleans.

To this the President of the Louisiana Board of Health replied sharply, intimating that the Governor of Texas did not understand his business, and that there could be no danger from yellow fever after November 1st, with quarantine raised.

BAD SHOEING AMONG THE POOR.—Every one has noticed how frequent deformities of the feet and toes are among the poor. That this is due to bad shoes, and not tight shoes, is apparent.

Some light upon this matter was recently given at the Geneva Hygienic Congress by Colonel Ziegler,

Chief-Surgeon of the Swiss Army. He read a paper on the evil effects of badly made shoes, with special reference to hygiene and the marching powers of soldiers. Colonel Ziegler mentioned that the Swiss examining surgeons are compelled to reject every year eight hundred recruits—the strength of a battalion—for malformation of the feet resulting from badly fitting shoes. The foot is in reality a bow, so elastic that at every step it contracts and expands, lengthens and shortens, and a line drawn through the centre of the great toe intersects the heel. But shoemakers, who are generally utterly ignorant of the anatomy of the foot, do not give room enough for the lateral extension of the great toe. They crib, cabin, and confine it until it is forced against the other toes. Hence arise frequent inflammations of the great toe, corns, ulcerations, and sometimes veritable articular inflammation. Another evil, which Colonel Ziegler ascribes in great measure to bad shoeing, is flat-footedness, whereby the arch is converted into a straight line, and prolonged walking and marching rendered impossible. Another cause of this defect is the habit of carrying heavy weights at an early age; but in most instances, Colonel Ziegler contends, perfect shoes would restore the foot to its normal condition. The first obstacle to a reform in the shape of shoes lies in the fact that it would involve a great expense in the shape of new lasts, an expense that shoemakers are naturally loth to incur. Fashion has also its lasts, and shoemakers consider themselves bound to conform to the prevailing mode. A test of a perfect pair of shoes is that, when placed together, they should touch only at the toes and the heels; the soles should follow the sinuosities of the feet, and to give room for their expansion should exceed them in length by fifteen to twenty millimetres.

The Chemical Composition of the Milk of Cows Fed on Distillery Refuse.—Dr. Ellis, at the last meeting of the Canadian Medical Association, read a paper upon this subject. He had made an analysis of the milk of cows fed with different kinds of food. The mean of the solids in the milk of distillery cows was 14.64; of other cows 11.82. The amount of fat in distillery cows' milk was greater than in the milk of others, the minimum of the former being equal to the average of the latter. The casein, sugar, and ash ingredients were much the same in both. The principal difference was the greater amount of fat in the milk of distillery cows. The distillery refuse when examined was found to consist of grain, with the sugar and saccharine matter removed. The fat and albumen remained, together with a small quantity of alcohol, as small as distillers can make it. He could not say whether the use of this food produced any morbid condition in cows.

An Iron Bolt Removed from the Rectum.—Dr. W. W. Horton, of Unionville, Conn., recently removed from the rectum of an imbecile and dumb male patient a bolt fully eight inches long, and with a flanged head three-quarters of an inch in diameter. The man was about forty years of age. The bolt had been in the rectum about nine days, and though the patient knew evidently that the piece of iron, which he himself had probably introduced, was the cause of his trouble, he could not make this understood by others. The threaded end of the bolt, which was either in or had passed through the sigmoid flexure, could be felt from without, over the great sacro-sciatic foramen, and had been considered by the man's friends to be a hernia. A truss had been improvised and placed over this.

Dr. Horton, upon being called, explored the rectum and discovered the head of the bolt. Passing an oiled tape over this, he made traction with one hand, while with the inserted fingers of the other he gave a rotary motion to the foreign body, and in this way, after the expenditure of considerable force, succeeded in working it back into the world. The man had been able to evacuate his bowels regularly, and to this undoubtedly is due the fact that no serious symptoms of inflammation supervened. It seems remarkable, from the roughness of the bolt, and the considerable pressure of the pad upon the supposed hernial tumor, that a perforation did not occur.

The Author of the Zymotic Theory of Disease.—In Sir John Pringle's work on "Diseases of the Army," which is now about one hundred and forty years old, the idea was most distinctly enunciated that disease-germs of certain classes of disease introduced themselves into the blood, and produced a fermentation of the blood, which was the cause of a particular type of disease. Sir John Pringle gave further the results of some observations which showed that he believed in the convertibility of certain forms of zymotic disease to other forms—diseases which they were accustomed to regard as of a different type.

The Sunflower Again.—We referred, some time ago, to the medical uses of the sunflower. A writer in a London journal still further discourses upon the value of this interesting plant. He says: "There would, indeed, appear to be but few purposes to which the sunflower cannot be turned with advantage to mankind. Scientifically dealt with, it will supply us alike with our morning roll and our evening cigar. It is equally susceptible of conversion into a cake of soap, surpassingly emollient, or into a rich and lustrous silk dress. As oil it may be consumed no less freely in the salad-bowl than in the table-lamp. Cattle will fatten sooner on sunflower-cake than upon linseed-cake. The little busy bee improves each shining hour more profitably in connection with the girasol than with any other opening flower. In fact, so numerous are its excellences and so beneficial its virtues that the sunflower may with great propriety be designated the friend of man.

"The Improvement of Climate at a Slight Elevation," was the title of a paper read by the Hon. A. F. Russell at a recent meeting of the English Sanitary Congress at Newcastle.

Mr. Russell would upset the long-received view that temperature regularly decreases with elevation from the ground, and, as the result of a series of experiments, concludes that at a moderate height there is constantly experienced an equable and healthful zone of atmosphere peculiarly adapted for invalids and delicate persons, while it is eminently more suited for all individuals than the air immediately above the surface. Mr. Russell even goes so far as to assert that the upper chambers of all houses are favorably situated in this respect, and that in towns such an altitude offers advantages in respect to atmosphere not inferior to those obtainable at seaside watering-places, the air being drier and more equable.

Mr. Russell's statements will hardly apply in this city. The air of upper stories is doubtless freer from dust and breezier, but that it is much drier or more equable may be doubted.

That the New York Tenement-Houses are still the source of much disease and crime is shown in the recent annual report of the N. Y. Association for Improving the Condition of the Poor. The special object of the Association has been to secure tenement-house reform, and so procure healthy houses for the poor. The abolition in great measure of the Hunter's Point nuisances has resulted in an improved condition of affairs in the tenement-houses on the East side. For the Health Department they have not quite so much to say in praise, though it is acknowledged that while many defects in drainage, ventilation, etc., have been remedied, many culpable violators of the law have not been compelled to comply with its terms. During the past year 1,304 tenement-houses have been inspected, and the condition of 443 of these has been remedied in whole or in part.

The Conversazione given to the International Medical Congress at London last year, cost the city $10,495.

Divorced on Account of a Persistent Hiccough.—Dr. Pollak, at a recent meeting of the St. Louis Medical Society related a case of persistent hiccough which lasted for twenty years and resisted all treatment. The patient was a lady, and her husband was compelled to get a divorce from her. He could not sleep with her, and it was most unpleasant. The woman was apparently strong and healthy.

Friction Sounds from Dilatation of the Heart.—M. Lepine has found friction sounds in patients having no lesion of the pericardium. Upon post-mortem examination, dilatation of the heart was found.

M. Siredey has lately observed a complication of typhoid fever, not alluded to in the books in general use. It is periostitis, generally of the tibia, appearing during convalescence. — *St. Louis Medical and Surgical Journal.*

Lunacy Commissions. — The November issue of *The Century* has an interesting editorial in which the need of a responsible Board of Lunacy Commissioners is pointed out.

Dr. D. A. Cleaveland, of Middletown, argues ably to the same effect in the *N. E. Medical Monthly* for October.

The Milk Crusade.—In the quarter ending September 30, 1882, the City Board of Health has made 5,011 special examinations, 73 analyses, and has seized 9,560 quarts of milk unfit to sell.

Mr. George E. Waring, Jr., has been appointed member of the National Board of Health, vice Dr. Charles F. Folsom, resigned.

The Presbyterian Hospital held its fourteenth anniversary on October 26th. According to the report for the past year, 1,202 patients were treated in the hospital, the number being largely in excess of previous years. Of this number 87½ per cent. were free patients. Six hundred persons received assistance through the ambulance ser ice, and the capabilities of the institution were at times taxed to their utmost extent for want of room.

Columbus Medical College. — The discussion about this college has been kept up very actively in our various exchanges. There seems to be but one opinion as to the character of the college—that it was but little better than Buchanan's diploma mill.

Small-Pox and Scarlet Fever are prevailing extensively in Cincinnati. Much complaint is made against the city government, "the filthy streets and reeking gutters."

A New Anatomy Law in Maryland. — Up to within a few months Maryland has been among those American States whose laws were silent regarding the practical study of anatomy and the desecration of graves. A law has recently been passed, however, which authorizes the use of bodies requiring burial at the public expense, except in cases where the deceased have requested burial, or are strangers or travellers, "for the advancement of medical science" *within the State*, and provides that officials of Baltimore city and county shall permit any physician or surgeon of the same city or county to take such bodies, upon his making a request for them within forty-eight hours after death.

Dr. J. J. Woodward, U. S. Army, has returned from Europe, and the profession will regret to learn that his health has not been improved by his trip.

Woman's Work and Standing in the University of London.—In the mathematical honor list the names of women do not appear, nor in that for zoology. In science generally the female students can hardly be said to be pre-eminently successful, while in modern languages other than English they have secured far more than the average proportion of the honors due to their numbers.

The Johns Hopkins Medical School.—It is announced with some show of authority that the trustees of the Johns Hopkins Hospital design opening that institution, and the medical school to be established in connection with it, in the fall of 1883. This announcement is somewhat surprising, says the *Maryland Medical Journal*, in view of the repeated statement that the hospital would not be ready for inauguration for five or six years at least. The authorities, however, have decided not to wait for the full completion of the extensive buildings, but to commence work as soon as the accommodations already provided can be rendered available. These consist of an administrative building, a male and a female pay ward, a kitchen, a nurses' home, an apothecary building, octagonal wards, an isolating ward, an autopsy building, a free dispensary, an amphitheatre, and a laundry. These, with the exception of the last, are already under roof, but no inside work has yet been done upon them. About $1,300,000, including cost of ground, has so far been spent on the buildings, which, when completed, will have a capacity for four hundred patients. A site for a building for the medical school has been purchased in the vicinity of the hospital.

Frequency of Rheumatism.—Among adult civilians the proportion of persons having rheumatism (chronic, muscular, or articular) is about one per cent., as shown by the U. S. Provost-Marshal's reports.

Our esteemed contemporary, *The Louisville Medical News*, is showing some of its old-time piquancy under its new editorship. It denies the versatility which we were disposed to attribute to the teachers in its local schools.

The New Medical College at Chicago, the College of Physicians and Surgeons, opens with a large class. Its fees are said to be only about one-half as great as those of the other two regular colleges, to which fact is imputed some part of its prosperity.

Our excellent contemporary, *The Sanitarian*, is to be published weekly after the first of January next.

Crural Neuralgia among Dentists.—Crural neuralgia is said to be somewhat frequent among dentists, owing to the position they have to assume during their work.

An Improbable Interview with Mrs. Langtry.—It is rumored that Mrs. Langtry, the English beauty, has been interviewed by a medical reporter. She said that she was not a homœopathist, as had been stated; she believed in the New York code, however. Her impressions of American medical men had so far been very favorable, and confirmed previous anticipations formed by a constant reading of The Medical Record. The branch of medicine in which she had been chiefly interested was dermatology; in this America easily led the world, and she was sorry she could not have got over in time for the Newport meeting of the Association. She attributed the beauty of her complexion to a constant study of American dermatological literature.

Mrs. Langtry was hardly prepared to give her opinion of Post-Graduate Schools, but thought they were very nice. She would send tickets, she said, to any doctors not connected with some medical school—it seemed such a pity. The reporter told her, however, that there were none such. Mrs. Langtry preferred to take her medicines in pill form. She liked the oval-shaped, sugar-coated ones best.

Mrs. Langtry asked about our insane asylums, and strongly urged the use of the tight-fitting jacket known as the "Jersey," as a substitute for camisoles and strait-jackets.

Sweet Peace.—Two New York neurologists were recently seen to shake hands with each other in a cordial manner. It is thought now that it will not be necessary to organize a third neurological society.

Night Medical Service of Paris.—In this service there occur about five hundred midwifery cases per year. It is proposed to raise the fee for this class of cases from ten to twenty francs.

Guaiac, for the Cutting Short of Acute Tonsillitis.—Dr. Morell Mackenzie says that guaiac given early will rarely fail to cut short an acute tonsillitis. The formula is as follows:

℞. Resin guaiac ..... 70 grammes.
Gum tragacanth..... 43 "
Sacchar. alb..... 17 "
Black currant paste ... . q. s.

M. Div. in trochischi No. 350. Sig.: One every two hours.

One can also give aconite, as recommended by Ringer. If the disease is not checked, give small pellets of ice.

Nitric Acid for Chilblains.—Dr. Lapatin who had a large experience with soldiers during the Turco-Russian war, recommends nitric acid as an application in chilblains. Equal parts of dilute nitric acid and aqua menth. pip. are pencilled on the toes, at first daily, then twice a day. After three or four days a brownish scurf is formed, which is thrown off.

Decrease of Blindness in Prussia.—It is very satisfactory to note that one of humanity's afflictions is not on the increase—at least not in Prussia. In 1870 there were 22,978 blind persons in that country; in 1880 there were only 22,677. The population had meanwhile increased 10.6 per cent., so that while in 1870 there were 9.3 cases of blindness to every 10,000 inhabitants, in 1880 the ratio was only 8.3. Only about 25 per cent. of blind persons were born so. It is believed that the diminution is largely due to improvement in medical care and treatment.

Frozen People.—It has been a mooted question what would be the best way to resuscitate those frozen. Laptschinski seems to have settled the question. Of twenty animals gradually brought to in a cold room, fourteen died; of twenty introduced at once into a warm room, eight died; of twenty placed immediately in a hot bath, all recovered.

The Poison of the Borgias.—Perret makes the statement that the base of this infamous poison was oil of ergot.

Domesticity as a Cause of Insanity.—Mrs. M——, aged forty-four, mother of eight children, acute mania. The husband, when asked if he could suggest any cause for her illness, exclaimed with much animation that he could not conceive any reason. "She is a most domestic woman; is always doing something for her children, is *always* at work for us all; *never* goes out of the house, even to church on Sunday; never goes gadding about at the neighbors' houses, or talking from one to another; has been one of the best of wives and mothers, and was *always* at home." The superintendent, in commenting on this case, says: "This appreciative husband could hardly have furnished a more graphic delineation of the causes of his wife's insanity, had he understood them never so thoroughly."—*Report of Hartford Retreat for Insane.*

Sulphur and Malaria.—At a recent meeting of the Paris Academy, M. d'Abbadie called attention to some facts regarding marsh fever. Some African elephant hunters from plateaus with comparatively cool climate brave the hottest and most deleterious Ethiopian regions with impunity, which they attribute to their habit of daily fumigation of the naked body with sulphur. It is interesting to know whether sulphurous emanations, received involuntarily, have a like effect. From inquiries made by M. Fouque, it appears that in Sicily, while most of the sulphur mines are in high districts and free from malaria, a few are at a low level, where intermittent fever prevails. In the latter districts, while the population of the neighboring villages is attacked by fever in the proportion of ninety per cent., the workmen in the sulphur mines suffer much less, not more than eight or nine per cent. being attacked. Some other facts, tending to show the anti-malarial influence of sulphur, are given.

It will be a great comfort for some to know that though the bottomless pit is feverish, there can be no real malaria.

"The History of Great Epidemics as Shown in Coins and Medals," is the title of a curious work by Drs. L. Pfeiffer and C. Ruhland of Tübingen. It describes the medals commemorating great famines, floods, comets, the disappearance of yellow fever, cholera, the discovery of vaccination, etc.

Abscesses in Elephants.—Abscesses are often formed under the hard epidermis plates in the skin of the elephant. They are generally small, ranging in size from that of a pea to that of a hazelnut. Being covered by the fixed skin, they cannot readily find an opening on the surface. They are usually

discovered accidentally by the painful movements of the animal while it is being cleaned, whenever the sore spots are touched.

In several instances elephants have been known to carry, by means of their trunks, the hands of their keepers to the painful place. These abscesses are principally caused by the penetration into the skin of filth and foreign matter, such as grains of sand, slivers of wood, etc. The treatment consists simply in thinning down the epidermis until the small pus sac is opened.—*Journal of Comparative Medicine.*

PESSARY IN THE RECTUM.—Dr. H. L. Turney relates (*Nashville Journal of Medicine and Surgery*) the history of a lady patient who had been treated by a homœopath for retroverted uterus. Dr. Turney was summoned to her one night in haste and found the patient in great pain. He examined her and found a large size Hodge pessary skilfully lodged in the rectum.

THE FREQUENCY OF FLOATING KIDNEY is greater than is supposed, according to Dr. Skorczewski. Among 1,422 persons examined he found 35 subjects (32 females, 3 males). In 5 of these both kidneys were movable.

The causes are, pendulous abdomen, disappearance of circumrenal fat, atony of tissues, subsequent to febrile diseases, and the pressure of some hypertrophied abdominal viscera. In Dr. Skorczewski's cases there was very often observed coexistence of floating kidneys with malarial hypertrophy of the spleen.

A NEW REMEDY FOR SPASMS.—The *Medicinische Central-Zeitung*, of July 15, 1882, publishes the result of experiments instituted by Dr. Schiffer, of Berlin, for the purpose of determining the therapeutic value of the *extract of guachamaca*, a tree indigenous on the Apuche mountains. As a specific for all spastic conditions of the motor apparatus we so far possess, in reality, one remedy only, curare, which, however, on account of its danger, and the uncertainty of its action, as well as of the remedy itself, has mostly been used for physiological experiments alone.

Guachamaca extract, prepared from the bark of the quebracho plant, which belongs to the same class as the oleander (Nerium ol., L.), and of which latter the skin between tree and bark is also poisonous, is a remedy which, while not so dangerous in its effects, is far more reliable and uniform in its action and can besides easily be procured pure and genuine, and of always equal strength, as it is by no means rare.

Schiffer experimented with this drug, and made his observations in the clinic of Professor Frerichs. He employed the remedy in solution, in the dose of one-sixth of a grain, and by the hypodermic method, in cases of tonic and clonic spasms of the muscular system, and always with a very good effect. He noted also that, administered internally, no matter in what solution, the drug was as little absorbed by the mucous membrane of the alimentary canal as curare is.—*Philadelphia Reporter.*

PROFESSOR VIRCHOW once said in some of his lectures that of ten students to whom he would show a pathological specimen, nine could not see it.

A NEW DISEASE.—A California physician who discovered a new disease—love madness—has been experimenting with the person afflicted therewith and has produced the "love parasite," or bacillus micrococcus. This he cultivated up to the twentieth generation, and with the parasites of that generation he inoculated a number of subjects. The inoculation was invariably successful, symptoms of the disease appearing a very short time after the operation. A bachelor, aged fifty, on the first day after the inoculation had his whiskers dyed, ordered a new suit of clothes and a set of false teeth, bought a top buggy, a bottle of hair restorer, a diamond ring, and a guitar, and began reading Byron's poems. The inoculation produced symptoms of the same nature in a young lady of forty-five. She spent five dollars at a drug store for cosmetics, bought a lot of new hair and a croquet set, sang "Empty is the Cradle," sent out invitations for a party, and complained that the Chico young men do not go into society. An inoculated youth of seventeen, employed in a country store, did up a gallon of molasses in a paper-bag, and also, in a fit of absent-mindedness, put the cat in the butter-tub and threw some fresh butter out of the window. Finally, he sat in a basket of eggs while looking at a photograph of a pretty girl, and was discharged for his carelessness. The Chico doctor is still experimenting, and will soon lay the results of his observations before the medical world.

MEDICAL TROUBLES IN MAINE.—A correspondent of the *Boston Medical and Surgical Journal* writes concerning the state of medical affairs in Maine, and affirms them to be quite inharmonious. The constitution of the State Medical Society is unsatisfactory, he says, because it gives plenary power in the matter of membership and discipline to a board of five censors. It is desired, therefore, by some to reform it. The Maine General Hospital is said to have been foisted upon the State Association. The country physicians find that it attracts their paying patients, who go there to be operated upon, when they could perhaps be treated equally well at home. The advantages of the hospital are widely advertised throughout the State. The medical school of Maine is also acting in a way unsatisfactory to many. We are told that another attempt at change will be made when the Society meets again.

THE CALAMITY IN THE SEGUIN FAMILY.—On Wednesday morning the public were startled with the dreadful announcement that the lovely wife of Dr. E. C. Seguin, of this city, had, in a fit of temporary insanity, shot all of her little children—three in number—and afterward herself. She had taken them to an upper room, tied their hands behind their backs, and then, under the pretext of playing "blind man's buff," first killed the eldest, a beautiful boy of six years, then two sweet little girls, aged respectively five and four years, and evidently in an instant afterward took her own life. When found in the evening, some time after the commission of the deed, all were dead. The lady was of a most lovable disposition, had been devoted to her husband and family, and had shown no symptoms of insanity except occasional attacks of melancholia, for which she could not account, and which she bravely endeavored to overcome. Her devoted husband, with an affectionate concern for her condition, had arranged to have her accompany him on a pleasure trip the next day; but he came home in the evening to find himself suddenly deprived of his entire family. A greater calamity could not befal any one, and coming thus upon Dr. Seguin, calls forth the deepest and most heartfelt sympathy of his many friends. May he have the strength to bear this terrible affliction.

Original Lectures.

MEDICAL NEW YORK—OLD AND NEW.

AN ADDRESS DELIVERED AT THE INAUGURATION OF THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

BY D. B. ST. JOHN ROOSA, M.D., LL.D.,
NEW YORK.

THE recollection of the oldest inhabitant of Paris or London does not run back to the time when each of those cities was not a great metropolis. The traditions of these great centres are those that belong to vast populations. From time immemorial they have contained crowded streets, long lines of shops, grand cathedrals and the other attributes of great towns. New York may well claim to be a metropolis; her vast commerce and her million and more of people are sufficient to justify her claim. She is certainly a mother city now. But she is a modern metropolis. Her traditions are those of a provincial town, vying with Boston and Philadelphia and Newport for the honor of being a chief city in a frontier country. There are probably New Yorkers in this assemblage, who remember the time when the pigs ran about Broadway, and when every family that kept a carriage was known by name and by sight by the average citizen.

The rapid growth of New York offers an explanation, if not an apology, for many of the imperfections that exist in the management of public affairs. We can hardly expect of an overgrown and awkward boy the culture and understanding of a man. It is difficult for one who has seen with his own eyes the wondrous change that has converted New York into one of the centres of the world, to realize that the things and methods that were suitable for a small town, will no longer fulfil the requirements of a great city. The changes that are so marked in the commercial and social life of New York, are none the less decided in the position of that profession which, through some of its representatives, has solicited and secured your presence to-night.

New York as a town containing a few doctors, one small medical college, with a hundred medical students, offers a great contrast to the medical metropolis that we live in to-day. If the consideration of such a theme before this audience needs any apology, it may be found in the fact that much of the good health of the city and the nation may depend upon the character and wisdom of a resident profession that annually sends out five hundred or more new doctors to practise with drugs and cutting instruments.

At one time, a little before 1841, the one medical college of New York was so little known or was so obscurely situated that an aspiring student, now a distinguished professor, could not be directed to it by the gentleman to whose office he went to begin his medical studies. Yet this was the day of Mott, of Kearney Rogers, of Griscom the elder, and of Alexander H. Stevens, of Hosack and of Francis. The New York Hospital was upon Broadway, in front of Pearl Street, its grounds covered by green grass and studded with ancient trees. This hospital and not the college was the surgical and medical centre of the city.

A great change was about to come upon the existing system of medical education, but the college hardly knew it. The men at the hospital did. They knew that the learned essays, the eloquent harangues must give way to colloquial instruction in the presence of the patient. In these days the colleges have learned that medicine and surgery cannot be taught like law and theology. They are fast becoming vast dispensaries, dissecting-rooms, and laboratories. The science and practice of medicine are taught by facts and not by theories. In these quiet times in the medical New York of some fifty years ago, there was but one dispensary, and that was scarcely ever used by students. There was an occasional invitation to an operation in the small amphitheatre in the hospital. There were, however, brilliant triumphs in surgery; triumphs that made American surgery famous, and which will make doctors talk of the surgeons of those days as long as they talk of anything.

There were also excellent and wise general practitioners. They had no thermometer, but the *tactus eruditus* stood them in good stead, and they often made prognoses that we who are reliant upon instruments of precision might envy. Unambitious beyond the ambition to serve their patients, they reverently consulted the treatises of the fathers, or the essays and cases of their contemporaries across the sea.

> "Far from the madding crowd's ignoble strife
> Their sober wishes never learned to stray."

In those days a New York doctor had no idea of writing a book, perhaps not even of reporting cases in print. At the very most, he might contribute reports of his cases to one of the few journals, but if of a literary turn of mind he contented himself with editing the works of an Englishman or of a Scotchman, or perhaps he translated some French writer. Almost with bated breath did these men, some of whom are worthy to be compared with the best of our time, speak of the medical men of the old world, separated from them as they were by not only miles of sea, but more than all, by lack of opportunity for mutual intercourse, for self-instruction, such as London and Paris gave in good measure. Little did they think of the day of the Flints and Dalton, Sims and Thomas, of Emmet, Hammond, Jacobi, Hamilton and Barker and Sayre, and many others, when American text-books are on every table in trans-atlantic medical libraries, and are quoted at every lecture in European clinics.

In those times the doctors knew each other not only by name, but so well as to enjoy a joke at the expense of one another's personal characteristics. They stopped each other on the street and talked of the weather and the politics of the day. Indeed Hosack and Francis interested themselves in all the social and literary affairs of the time. At No. 1 Bond Street was a drawing-room whose Saturday evenings attracted the wits of the town, as well as those who might be temporarily in New York. That age was not all golden, however. There was opportunity for envy and cabals, for gossip and slander. The medical profession then as now was somewhat belligerent, and not always in a good cause. There was too much reliance upon foreign opinions, too little upon the great authority, the exact and intelligent study of the patient himself. While we have necessarily lost some of the restful attributes of life in a small town, the life among medical men is on the whole broader and better than it was fifty years ago. In these changes for the better New York easily takes the lead as a metropolitan city should. Even in her code of ethics she has during the last year, unlike her sister medical cities, taken a step which shows that she believes the conduct of a gentleman cannot be

defined by a set of rules. The steamship, the railway, the telegraph, and the telephone have made changes in medical as well as commercial New York. *Depau Row* is no longer up town, nor is Chambers Street the centre. All the surgical wisdom of the city is not to be found in the New York Hospital. The consulting-rooms of our physicians are now filled with patients from San Francisco as well as from Bound Brook and Newtown, and all are anxious to get away by the first afternoon or evening train. There is no longer a *rus in urbe* on Manhattan Island, since Harlem Lane has given place to St. Nicholas Avenue.

It is unfortunate for New York that the business men have been the chief ones to recognize this change in the city. They are quick to exchange their cargoes from sailing ships to steamers, to build immense warehouses, and to connect this market with the others of the world by the most expeditious means. They at least know that New York is no longer a rival of Newport. But New Yorkers have been slow to learn that their city has become an educational as well as a commercial metropolis.

Some years ago I attended a public dinner in this city, at which one of the speakers was the mayor. The dinner was given by the alumni of one of our medical schools, and the chief subject of discussion was the advantages offered by the metropolis in the way of professional study. In the mayor's speech, he expressed some surprise that New York should be thought to be anything more than a commercial town. This mayor was one who stands high among his predecessors and successors in character and intelligence. He had taken an especial interest in educational matters, and yet it was a new idea to him that New York perhaps might be, or already was, a university centre.

But it is not strange that the chief official of this city took such a view. Our public men have not been educated to take any other. In Boston, when President Eliot wants a hundred thousand dollars for Harvard College, he walks down Beacon Street, and, without pulling a door-bell, he finds the son of a Puritan who will give it. In Philadelphia, the new provost of the university calls together the best representatives of the city to aid him in the management of his great charge, and he finds everywhere sympathy and support. In Boston, no rich man can be properly buried who has not left some money to Harvard College, the Medical School, a hospital, or the Institute of Technology. In New York, half a dozen men, with money enough to endow Columbia College and the University, besides creating a thousand free beds in a hospital, die in one year and do not mention New York in their wills. It is the great stamping-ground, however, for the man who wishes to plant a new denomination in a parish already having five or six to each fifty people. Peripatetic presidents of Tuscaloosa and Oshkosh Universities wander about from one banking-house and private house to another and try to enlist the sympathies of every moneyed man in the community. And at public dinners of the academic institutions, where there are a hundred men who have acquired their professional education, and have made fame and wealth in New York, the collection-box is passed about again, till New York charities and professional schools are in despair at any recognition of their claims.

I have heard New York accused of a want of civic pride. Be this accusation just or not, she has certainly not appreciated her great position as a place for extra academic, for professional, or, as I prefer to say, for university study. For example, the University of the city, founded with a broad and comprehensive charter by men whose ideas were far ahead of their time, now that her opportunity has come, chooses to hug her feeble little college rather than lift on her strong arms the University that rightfully belongs to her. In her professional schools of law and medicine, in the addition of others, is her great work, for New York parents have long since resolved that college boys are better off in New Haven, Princeton, and Williamstown than in a vast city.

Columbia College was very loth to begin her scientific school, now one of her chief glories, and she is very slow indeed to use her enormous advantages of wealth and renown for that which is her great future. The medical school of that College contains, perhaps, twice as many students as does the academic department, and yet it remains unconnected with it except in name. The school of law also out-numbers the undergraduate department, while its fame is as wide as the limits of the nation.

New York has not kept pace with the small towns in the number of her undergraduate students, or in the reputation of her colleges, but her professional schools have been for fifty years growing in magnitude and importance.

New York now has more than two thousand medical students. Her hospitals and dispensaries have increased until they can scarcely be named off-hand. Yet the medical colleges continue to be private and proprietary institutions. Their teachers are, I believe, among the best of our country and worthy of any country. But while Boston and Philadelphia are making vast strides in improving the methods of instruction, New York is obliged, from lack of endowments, to hold on to the old plan. Those who have studied one, two, and three years sit upon the same benches, hear the same lectures, and crowd the same wards and amphitheatres. There is no matriculation examination, and, unless in exceptional cases, but one final one at the end of three years, of what is in some cases merely nominal study. Graduates in medicine, who came here for special study, so far as they heard lectures at all, heard the same that were given to undergraduates under the conditions I have described. In fact, the changes of the time have not been appreciated by the educated and wealthy people of New York. Immersed in their own affairs, untaught by those who should have taught them, so far as they have taken an interest in educational matters, it has been chiefly in public schools and colleges, while professional institutions have scarcely been observed by them. Medical men have been remiss in not educating their fellow-citizens upon these subjects. Although medical teachers have been enlarging their curriculum and increasing the number of their teachers in the colleges, the growth has been chiefly at the top and not at the foundation of the structure. No fundamental changes have as yet been made in New York medical colleges.

What relation has our present enterprise with a reform in medical instruction in our city? Certainly it has nothing to do with undergraduate reforms. However much as individuals we may be interested in such changes as shall cause a New York medical diploma to be evidence of fitness to practise, the school which we inaugurate to-night has nothing to do with this subject. Our object is not to make more doctors, but to improve those we have. We propose to make a centre in which it will be possible for a gradu-

ate in medicine to fit himself for the detection and treatment of the diseases that are not fully discussed in the studies and lectures of the ordinary course of three years in a New York medical college. It is true that the various subjects upon which our lectures and demonstrations are given are treated upon in these schools. There is a weekly lecture upon most of the subjects, besides, in the course upon medicine, surgery, obstetrics, anatomy, there are incidental allusions, more or less full, which, if availed of, give the graduate a general knowledge of what have come, rather unfortunately as it seems to me, to be called specialties. But, and it is this *but* which furnishes a reason for our existence, there is no such knowledge furnished as will enable a man to recognize and successfully treat many of the common ailments of men and women. Even a hospital training of from one to two years, which unfortunately but a small proportion of our graduates are able to secure, leaves many subjects practically untouched. Honest practitioners confess at once, with much embarrassment, their lack of knowledge, much more of experience, in many cases, and, if possible, ignore their existence when they cannot send them to men whose opportunities in these departments have been sufficient. Many others, equally honest, living in places remote from large towns, seek by means of text-books, and their knowledge of the general action of disease, to do what they can, but even these must leave much untouched. If proof of this statement is desired it is easily furnished in the crowded clinics of the medical colleges of small towns. There patients are furnished by the score or even hundreds, who await from year to year the arrival of special professors who have been chosen to supplement the regular faculty.

Many practitioners come to New York every year to acquire the practical knowledge of diseases called special, but which they find to be very general, and of which they were taught very little in their fifteen months of attendance upon lectures. What can they do? They may matriculate at any of our colleges and in the dissecting-rooms; if it be anatomical knowledge they desire to supplement, the facilities are ample and excellent. Of late years, too, the dead-houses have also done much to instruct the general practitioner. He can, besides, with some trouble of inquiry and running about, find special courses in diagnosis, where experts will furnish excellent practical teaching. If, however, he seeks in the lectures upon special subjects in the colleges that which he must acquire in a short time or not at all, he finds himself baffled and disappointed. He soon finds that these weekly lectures and demonstrations are for those who have no practice behind them, whatever may be before, for those who have the whole five months of the session at their disposal. Besides, the classes are so large that only the early and persistent men on the front benches have an opportunity to study the cases with the teacher. Even for those who find the courses they desire in the dispensaries and hospitals, the difficulties are by no means insignificant. There is no central place where they may find what they desire. This centre we hope the New York Post-Graduate Medical School may furnish. But it may be said that existing medical schools should furnish these facilities. This we fully admit. At least the corporation, which should be at the back of the teachers, should have a post-graduate as well as an undergraduate school, or the course should be lengthened so as to include it. This is the ideal medical department of a university. But ideals are not always to be obtained. Certainly this ideal is not yet to be obtained in New York. A man who quarrels with the inevitable is not wise, but he may flank a difficulty. He may not be able to get out of the wet, but he may wear a Macintosh and carry an umbrella. I think the colleges would be greatly the gainers by this enlargement of their scope. But as proprietary institutions, without an interested corporation to sustain, and without invested endowments, they believe that undergraduate instruction is all they can properly undertake. It would be easy to show that Berlin and Vienna have acquired their pre-eminence as medical centres, not by the teaching of undergraduates, but by the instruction furnished to medical men. The practitioners who have spread the fame of Helmholz and Virchow, Traube and Ludwig, Langenbeck, Arlt, Graefe, Skoda, Braun, Oppolzer, Politzer, and Gruber have been in large measure graduated physicians, who have sat at the feet of these great teachers after the fundamental studies have been finished.

A few weeks ago your speaker had the opportunity of looking over the new building of the famous school of medicine of the University of Edinburgh. Nothing can exceed the excellence and grandeur of the arrangements for the study of anatomy, physiology, and so forth, as exemplified in the new structure of this renowned and in some respects model university. My guide, one of the instructors, said to me, "What we need now in Edinburgh to attract the men who go to Germany, are better provisions for graduates. In that we are deficient. For that cause we are losing, and have lost some of our proper fame." If this be true of Edinburgh, how much more true of New York. This city of ours stands without a successful rival in the country in the opportunities she can furnish to the medical student. This statement may seem a trifle strong to our neighbors in Boston and Philadelphia. I will, however, leave the students who have seen the advantages offered respectively by these cities to justify my statement. New York is now, unless some great disaster overtake her, destined to continue to be the commercial metropolis of the Western world. If common wisdom direct the beneficence of her citizens, if her civic pride can be aroused, in spite of Baltimore and the Johns Hopkins, New York will be the university centre of America. In devotion to this chief city of my native Empire State, I have felt for years that it was my duty, which nothing can deter me from, to cry aloud as to the importance of the effort which shall one day accomplish this end.

> "May I never
> To this good purpose that so fairly shows
> Dream of impediment."

The elements which are yet to be fused to this form are all about us. That our school may be one of the agencies in continuing and securing our intellectual pre-eminence is the earnest desire of those whom I have the honor to represent. We cannot believe that it will always continue in its present detached condition. Our aspirations are far beyond those of a school whose affairs are controlled by those who should be busied chiefly with teaching. It will yet be a part of a great university.

Circumstances over which we have no control have compelled us to add another unendowed school of medicine to those that now exist. But we have no idea that it will remain so. When we have demonstrated our usefulness and the necessity,

we shall seek an endowment at the hands of our fellow-citizens. We believe that we shall see the day when New York will first nourish her own children before she is generous to others. We also believe that the governing bodies of our universities will yet make them so in fact as well as name, that medical colleges will become an actual part of them, and that then the post-graduate medical school will have its appropriate place in the third and fourth years of study. Not division, not separation, but unity in university instruction is what we seek, and what we believe our institution will ultimately promote. We shall belittle our power and fail to exert our proper influence if we do not all, merchants, lawyers, clergymen, and physicians, soon recognize the fact that not even Prague in the thirteenth century, when thousands of students came to her halls on the banks of the Moldau, had a better claim to be a university town than New York has in the nineteenth.

London has not been wise in dividing her medical profession into a large number of medical schools. Some of her influence has been lost on this very account, and I speak, not from the superficial opinion of Americans who have visited and studied in the metropolis, but I give the deliberate judgment of one of her most successful and eminent practitioners who has lately visited New York.

Paris, Berlin, and Vienna have obtained their enormous power over medical action and thought, in part, at least, because the faculties of their great universities have comprehended nearly all the men in the cities who have been competent and willing to teach medicine. There has been concentration of effort at one centre. That consummation I earnestly hope for New York.

Within the memory of many of us, Italy, dissevered and separated into petty kingdoms, has been united by the patient genius of Cavour, and now she is a united and powerful country.

Germany, also, by "blood and iron," has again become a nation, and her power in the councils of the world greatly increased.

I trust there will arise for our beloved city of New York, not a Cavour or Bismarck, but such a wise understanding on the part of her citizens that they shall with one accord strive for a unity of plan and action which shall unite all her scattered, unknown, and undeveloped energies, and cause her to be everywhere recognized and resorted to as the great universtiy centre of our side of the Atlantic.

SOLUBILITY OF OFFICINAL MORPHIA SALTS IN WATER AND ALCOHOL.—Some recent experiments by J. U. Lloyd (*New Remedies*) show that some of the statements of our text-books in regard to the solubility of morphia salts require modification. The solubilities, as determined by Mr. Lloyd, are as follows: Acetate of morphia: one part requires of water at 60° F., 11.7 parts; at 212° F., 1.34 part; of alcohol, sp. gr. .820, at 60° F., 68.3; at the boiling point, 13.3. Hydrochlorate of morphia: one part requires of water at 60° F., 23.4 parts; at 212° F., 0.51 part; of alcohol at 60° F., 62.7 parts; at the boiling point, 30.8 parts. Sulphate of morphia: one part requires of water at 60° F., 21.6 parts; at 212° F., 0.75 part; of alcohol at 60° F., 701.5; at the boiling point, 144 parts. The most important fact to be observed is that morphia sulph. is almost insoluble in cold alcohol, and that water will not hold at 60° F. more than about three grains to the fluid drachm.

Original Communications.

INTERNAL ŒSOPHAGOTOMY.[1]

THE DIVISION OF MEMBRANOUS OR CICATRICIAL CONSTRICTIONS OR OBSTRUCTIONS IN THE ŒSOPHAGUS BY INTERNAL SECTION.

BY J. O. ROE, M.D.,

[ROCHESTER, N. Y.,]

FELLOW OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION, MEMBER OF THE AMERICAN MEDICAL ASSOCIATION, OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, OF THE CENTRAL NEW YORK MEDICAL ASSOCIATION, ETC.

THE few operations of internal œsophagotomy that have been performed have given results that are very gratifying, when compared with the unsatisfactory results in most cases of dilatation, as well as of external œsophagotomy and gastrotomy, and notwithstanding accidental complications which sometimes unavoidably arise, the operation must take its deserved place among the operations in the œsophagus.

The published statistics of the operation show that it has been performed fifteen times. Eight times in France: first, by Maisonneuve, three times; after, by Lanelongue, once; Dolbeau, twice; Trélat, once; and Tillaux, once. Three times in Germany: Schiltz, twice, and Czerny, once. Once in Denmark by Studsgaard. Once in England by Mackenzie, and twice in the United States in the following cases.

Mrs. F. C. Robinson, of Spencerport, N. Y., aged twenty-four years, the wife of a druggist, was brought to me by Dr. P. G. Udell, her family physician, October 27, 1881, for consultation concerning a stricture of the œsophagus, from which she was suffering. The cause of the stricture was unknown. She first felt an uncomfortable sensation or obstruction in the lower part of her throat in February, 1874, after a violent paroxysm of laughter, but at that time had no difficulty in deglutition.

The dysphagia occurred quite suddenly one day during the following June. She first experienced difficulty in swallowing liquids and solids; semi-solids could be swallowed more readily. Soon it became almost impossible for her to swallow any substance but chocolate. This she could get down very slowly, and on this she sustained herself, though in quite a weakened condition. All solids and all other liquids would be returned shortly after taken.

In January, 1878, a severe form of stomach trouble came on, attended with vomiting of more or less blood, being due, it was thought, to ulcer of the stomach. Soon it became impossible for her to swallow any substances whatever, necessitating the employment of nutritive enemata to sustain her. This condition continued until the following June, when she was again able to resume her chocolate. At the beginning of the difficulty all substances which she could not swallow would be returned at once, but after a time they began to be regurgitated less quickly, until she could take half a glass of water or other substance and retain it for several minutes. This indicated the formation of a sac above the stricture, and from the walls of this sac undoubtedly much nutriment was absorbed—chocolate being the

[1] A portion of this paper was read before the Medical Society of the State of New York at Albany, February 8, 1882.]

only substance which appeared to pass into the stomach, though very slowly and with difficulty. This condition continued until she passed to the care of Dr. Udell, May, 1881, who diagnosticated the stricture of the œsophagus.

I should remark here that no previous diagnosis of stricture of the œsophagus had been made. The apparent gastric irritation was ascribed to indigestion or dyspepsia, hysteria, gastric ulcer, etc.

Dr. Udell at once began systematic dilatation of the stricture with flexible conical œsophageal bougies, and pursued it assiduously, but with very discouraging results. The tissue composing the stricture seemed to be of an elastic character, so that no matter how widely the opening was dilated it would return again almost immediately to its previous calibre, and no improvement in swallowing would follow. On exploration with a bulbous sound the stricture was found to be in the superior portion of the tube, about three inches (75 mm.) below its upper orifice. It was about half an inch (13 mm.) in extent, evidently a ring of elastic tissue. The opening was so small that only one of the smallest olive points (4 mm. in diameter) could be passed without using considerable force. Just above the stricture on the left side of the œsophagus was found a saculated dilatation into which the sound readily slipped, if it was not strongly directed toward the right side.

I advised Dr. Udell that this was a case very favorable for the operation of internal œsophagotomy. Accordingly, at the request of the patient, the operation was decided on.

Through the kindness of Dr. Morell Mackenzie, I procured of Mayer & Meltzer, London, an internal œsophagotome, made after Dr. Mackenzie's improved plan, having but a single cutting blade, as shown in Fig. 1. The shaft of the instrument is fifteen inches (38 ctm.) long, made of gum elastic and flexible. Through the centre of the shaft runs a stem, which is attached to the blade at the lower end of the instrument. When the instrument is introduced the blade is concealed in the metallic shield, which is firmly attached to the lower end of the shaft.

The distance which the blade is thrown out is regulated as desired by a screw in the handle.

Fig. 1.—Internal Œsophagotome, after Mackenzie.

December 7, 1881.—I divided the stricture by making a single incision through the posterior side. I was at once able to pass very easily a bulbous bougie, No. 18, English scale. There was very little hemorrhage at the time, but some slight bleeding followed during the afternoon, and clots of blood were vomited. The pain from the operation was very slight. The sensation, the patient said, was like a sharp sting or the scratch of a pin. The patient was ordered to abstain from taking any food by the mouth for two days, in order to exclude the irritation which the passage of the food and the *débris* lodging in the wound might cause. She returned to her home, and the next day after the operation, Dr. Udell began the use of bougies to keep the opening free, and to prevent the recontraction of the stricture.

For a day or two after the operation she suffered considerable pain in the chest and in the region of the stricture, and some soreness followed for three or four days on the introduction of the dilating bougies.

On the fifth day after the operation I received a note from Dr. Udell, stating that the patient was doing finely, and that he had passed without difficulty the bougie of the third size (14 mm. diameter). Liquid food passed readily into the stomach and was retained; and this had not occurred before in seven and a half years.

The stricture was then dilated three and four times each day with No. 2 (17 mm. in diameter), the next to the largest size of the bulbous bougies; but notwithstanding this, after a time the stricture began to give indication of recontraction, it becoming difficult to pass the No. 2 bougie which had passed easily before; and the swallowing of liquids became more difficult.

Accordingly, January, 1882, I repeated the operation, making two incisions, one in each side, laterally, but not quite as deep as the previous incision. There was no hemorrhage of consequence this time, and but very little pain or soreness on passing the dilators. The stricture now appeared to yield entirely, and in three or four days it was dilated to the full size of the normal calibre of the œsophagus without difficulty, and the patient began to take solid food.

At the time of the second operation, I became convinced of the inefficiency of the ordinary bulbous bougie for dilating purposes. In addition to this, difficulty is often encountered, after they have passed the stricture, in withdrawing them, because of their shape, being like an egg, conical at the distal end, and quite blunt at the posterior end. I therefore had some dilators made in six different graduated sizes, of hard rubber, cylindrical, tapering at both ends alike, and securely fastened to a whalebone stem (see Fig. 2). These I found to be an admirable improvement, as they could now be held in the stricture for a short time at each introduction, giving the benefit of pressure, with the advantages of which in overcoming such conditions all are familiar. The tolerance of these bougies by the œsophagus gradually increased, though their pressure against the larynx interfered with respiration and prevented their long retention within the stricture; while conical rubber or gum-elastic dilators of the same size cause such obstruction to respiration, by closing the laryngeal opening, as to necessitate their withdrawal at once.

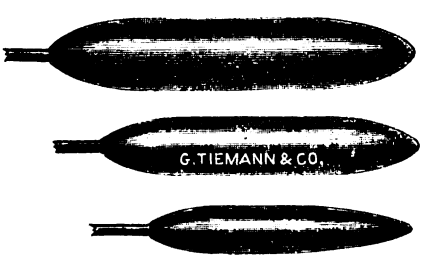


Fig 2.—Cylindrical Œsophageal Dilators.

With a stricture in the lower or middle portion of the œsophagus, this obstruction to respiration would not be encountered, and the instrument could soon be retained for a considerable length of time. The tolerance of an instrument by the œsophagus

is shown by Krishaber[1] in cases of disease of the œsophagus, where a stomach or feeding tube was retained continuously in different cases, from forty-six to three hundred and sixty-five days.

This plan of keeping the opening free and preventing a reunion of the cut surface, has worked admirably, as there is now no perceptible tendency to reclosure or narrowing of the passage, and the patient takes all kinds of food freely. At first considerable food would lodge in the sac, and when this was full it would be regurgitated, as before the operation, giving the appearance of vomiting from gastric irritation; but now the sac is gradually decreasing in size, and there is a corresponding decrease in this vomiting.

Case II.—Carlton A——, aged eight years, son of a lumber dealer of Rochester, was brought to me, January 25, 1882, for advice concerning a stricture of the œsophagus.

Sixteen months before, in mistake for water, he drank some washing fluid of the following composition:

Babbit's potash	lb. j.
Sal ammoniac	℥ ss.
Salts of tartar	℥ ss.
Water	qts. iv.

A physician was immediately called, who administered olive oil. For three or four days after his throat and stomach were irritable and painful, particularly on swallowing. This soon subsided, and for two weeks he had no difficulty in swallowing, and was considered well. He then began to have more or less dysphagia, which increased until about November 1st, when he could only swallow liquids, and these with some difficulty.

Dilatation of the stricture was now begun with a very small gum elastic bougie, a much larger one could soon be passed, and swallowing was so much improved that liquids could be taken readily and some solids for a short time.

The dilatation was now continued, though only once in two weeks, but in the fall of 1881 marked dysphagia came on, and at times it was almost impossible to swallow anything, even milk.

This condition continued until I saw him. He was then much emaciated and very weak.

Examination revealed an obstruction, as had been stated by the father, in the lower end of the œsophagus, through which I was unable to find any opening, even to pass the finest filiform bougie, with the patient under ether.

Every second or third day I repeated these unsuccessful attempts at finding a passage, until it seemed useless to continue them longer, but, remembering how others had succeeded in similar cases when about to abandon them, I concluded to try just once more, and, March 26th, was successful in getting through a fine filiform bougie, tipped with a metallic point. This I followed with slightly larger ones until the opening would admit a bulbous-pointed bougie, No. 18, English scale. With a flexible, conical bougie I could stretch the opening much wider, but it would contract again to the above size. Continued attempts at enlarging the opening by dilatation proved futile; therefore, June 2d, I performed internal œsophagotomy by making a single incision in the posterior side, that shown by the one-sided bulbous bougie, in Fig. 3, to be the deepest. There was no bleeding, the saliva being scarcely tinged with blood. Soon after the incision I began dilating again. The third day after I made a second incision in the right side as before. I repeated these incisions at intervals of four or five days, until I had made six in all, and

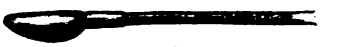


Fig. 3.

continued the dilatations. The opening is now permanently free, sufficient to admit a bougie 15 mm. in diameter, and swallowing is unobstructed. With improved deglutition the little fellow began to gain rapidly in flesh and strength, and to grow fast, and is now a stout and healthy boy.

The last operation previous to these just reported was done by Dr. Morell Mackenzie, of London, July 12, 1881.

I am able, through his courtesy, to present the record of the case as reported by him on the presentation of the patient at the clinical demonstrations before the Laryngological Section of the International Medical Congress, London, August 4, 1881.[1]

"Henry Alexander, aged thirty-six; ship-rigger, while engaged at work, September 17, 1880, drank, in mistake for water, some of a clear solution of potash (used for removing paint, etc.). He was at once admitted into the London Hospital. For three weeks he had ice to suck, and was fed by nutritive enemata. At the end of nine weeks a fine bougie (No. 1 or 2) was passed. After the lapse of thirteen weeks, with progressive dilatation of the stricture, he was enabled to eat fish. About the middle of February, 1881, he somehow caught small-pox, and was transferred from the London to the Small-pox Hospital, where he remained under treatment for four weeks, during which time no special attention was directed to the throat. On convalescence he returned as an out-patient to the London Hospital, but by that time had retrogressed in regard to swallowing, being able only to take jelly. He was admitted into the Throat Hospital, April 7, 1881, in a very debilitated condition.

"About the beginning of May, after use of ice, No. 4 bougie was passed. The stricture was found to commence at a level rather below the cricoid cartilage, the bougie then passing through a slightly tortuous track, deviating from right to left.

"Progressive dilatation was made, so that, by June 2d, a No. 8 could be got through the stricture; from this time progress became increasingly difficult. A graduated bougie was used, but by July 8th an advance of one size only had been made.

"Internal œsophagotomy was performed by Dr. Mackenzie on July 12th, the stricture being divided from below upward, in middle line, behind. No anæsthetic was administered. No. 14 bougie was passed without difficulty a few hours afterward. There was little pain after the operation, but this increased considerably toward the evening; it was referred to the stomach and to the back, and became severe enough to need a hypodermic injection of morphia to relieve it.

"On auscultation of the region to which pain was referred in the back (corresponding to the base of the right lung), fine crepitation on expiration and inspiration, with diminished breath-sounds, was found. Temperature, 100°; respiration, 40.

[1] De la sonde œsophagienne a Demeure. Ann. des Mal de l'oreille, du larynx, p. 265. Paris, November, 1881. Also, Transactions of the International Medical Congress, London, 1881, vol. ii., p. 392.

[1] For notice of the case, *vide* Transactions of the International Medical Congress, London, 1881, vol. iii., p. 332.

"July 13th.—Patient complains of very sharp pain on swallowing. Crepitation extending from right base to angle of scapula; diminished percussion resonance at lower part; slight, colorless, viscid expectoration. During the next few days the pulmonary signs became more marked; expectoration more profuse, but retaining the same characters. Patient has milk, eggs, beef-tea, and port (3 oz.), taking these well; some diarrhœa. Pains in stomach and right side more or less constant, increasing toward evening; obvious dyspnœa on slight exertion; spongio-piline, sprinkled with spts. tereb., for relief of pain, together with hypodermic injection occasionally at night.

"July 22d.—General condition fairly good; bougies 7, 8, and 9 passed.

"July 23d.—8, 9, and 10 passed. An expectorant mixture ordered. On successive days bougies were passed, similarly progressive in size.

"August 1st.—No. 15 passed easily; pain as before, but coming on only toward evening; less expectoration; crepitation still audible at right base. Temperature from time of operation has averaged in the evening a little above 101°, and in the morning a little below 100°. The patient died in the London Hospital about the middle of October.

"*Post-mortem.*—Both lungs were found considerably congested, and presented patches of pneumonia. The right pleural cavity contained a large quantity of sero-purulent fluid. Commencing about one inch below the cricoid cartilage, and extending downward for three inches, the walls of the œsophagus were found to be slightly thickened, hard and uneven on the inner surface, the lumen of the gullet being considerably narrowed for that extent. At the lower part of the stricture an incision of about an inch long was found extending through all the coats of the tube below, and through the mucous and part of the muscular tunic for the upper half of its length. The wound showed but little sign of cicatrization."

The unfortunate termination of this case Dr. Mackenzie largely attributes to the patient being a confirmed drunkard, as it was found impossible to keep him from taking spirits in large quantities.

Considering the slight attention which the operation of internal œsophagotomy has received at the hands of our surgical authors and the absence of any article on the subject in English that I am aware of, a review of all the cases, in which the operation has been performed, cannot but be of interest as well as profit. By studying its past record, its successes and failures, we can judge correctly, and without prejudice, its merits and demerits—facts rather than theories should govern our judgment.

Case I. (By Maisonneuve).—A young girl, in a fit of despair, swallowed a quantity of sulphuric acid, which produced an inodular stricture in the vicinity of the cardia, 3 ctm. long. Œsophageal bougies were introduced, and the patient nourished for a time by nutriment injected through them into the stomach. Notwithstanding the introduction of the bougies, the stricture continued to contract until it became impossible to introduce the bougies and for the patient to swallow even liquids in sufficient quantities to sustain her. She was greatly reduced in flesh and strength, and in immediate danger of starvation. Maisonneuve having just read a paper before the academy on internal urethrotomy, conceived the plan of dividing strictures in the œsophagus in the same manner. Accordingly he had an œsophagotome made by Charrière after the plan of his well-known urethrotome, only adapted to the œsophagus by being longer and thicker. It has two independent blades, sliding each in a groove on the outside of the stem, the point of which is tipped with a slender, flexible guide. The length of the instrument is 50 ctm. The blades are each 12 mm. wide, their cutting edge occupying only the anterior third, the other two-thirds being entirely blunt. To each of the blades is attached a long steel stem, provided with a button for working it, either alone or together with the other blade.

In using the instrument it is first carefully introduced through the stricture guided by the flexible point. Then one of the blades is introduced into the groove and gently pushed downward, severing the stricture. The second blade is introduced if required.[1] July 16, 1861, he made a double incision through the stricture from above downward, unattended by pain or hemorrhage. On the following day the patient could swallow bread, eggs, and meat freely. On the eighth day subacute peritonitis supervened, and death occurred on July 31st.

At the autopsy there was absolutely no inflammation of the œsophagus or of the surrounding cellular tissue. The stricture showed a perfectly clean mark of the scarification, confined entirely to the morbid tissue, which had been but incompletely severed. There was no lesion of the stomach, but there was an intense peritonitis, the origin and source of which was entirely unknown, though the cause seemed to be in the pelvis.

Case II. (By Maisonneuve).—That of a young woman with stricture in the œsophagus, just below the thyroid cartilage, caused by tuberculous infiltration. For three months the patient had been unable to swallow sufficient liquid food to sustain her, and she was almost moribund. It was impossible to pass the smallest sound. On July 20, 1861, with much difficulty and the exercise of considerable force, a fine whalebone bougie was passed. This was followed by a flexible bougie screwed to the stem of the œsophagotome, which was introduced through the stricture, and section of the stricture was made from above, downward. After the operation a large sound could be passed easily, and the patient could swallow food readily. Four days afterward she was attacked with acute peritonitis, and died August 1st.

The conditions revealed at the autopsy were almost identical with those of the former case. A slight mark of the incision through the tumor was found, but no inflammation in or about the œsophagus. Intense inflammation, with exudation, in the abdominal cavity. In both cases the stomach was examined to ascertain if a perforation had been produced, but none was found. Braun[2] suggests that there might have been one, too small to be seen on simple inspection, that caused the inflammation, but this seems highly improbable.

Case III. (By Maisonneuve).—M. C——, a man fifty-eight years old, had experienced for two years great difficulty in deglutition. The cause of the stricture was unknown. It was located at the junction of the upper and middle third of the œsophagus, and had gradually contracted to such an extent that only soup and thin broth could be swallowed.

April 3, 1862.—Two incisions were made through the stricture, when immediately afterward an ivory ball, 1½ ctm. in diameter, could be passed without difficulty. The pain attending the operation was very

[1] For illustration of this instrument, vide Lehrbuch der Chirurg von Dr. Eduard Albert, 1881, p. 542.

[2] Czerny's Beiträge zur Operativen Chirurgie, 1878, p. 86, note.

slight, and there was very little loss of blood. The same evening the patient could eat bread and meat. Eight days after, no accident having occurred and deglutition remaining good, the patient departed for the province and nothing more was heard from him.[1]

A fourth case of stricture of the œsophagus is reported by Lanelongue to have been given by Maisonneuve in connection with the above three cases, but on an examination of Maisonneuve's original article, the case is not to be found reported there.

As the case is undoubtedly authentic, and the reference wrong, I will cite it from Lanelongue. It is to be excluded, however, from the operations of internal œsophagotomy, as the operation was only attempted, but never performed.

"Besson, fifty-seven years of age, was admitted to the hospital, May 1, 1865, with a cancerous stricture near the cardia. Food was regurgitated immediately after taken. Internal œsophagotomy was proposed, but after many fruitless attempts at introducing the œsophagotome the operation was abandoned.

"May 20th.—An œsophageal sound was introduced, it was believed, into the stomach, and broth and herb decoction was injected, which passed without difficulty. Immediately after, there was anxiety, sharp pain in back, cold sweats, extreme lividity, pulse small and frequent, and death followed next day.

"At the autopsy emphysema and liquid was found in the posterior mediastinum. Perforation of the œsophagus four or five centimetres above the cardia, at the junction of the œsophagus with the cancerous tumor. This perforation was caused by the penetration of the sound. There was a cancerous tumor at the inferior extremity of the œsophagus, with infiltration along the lesser curvature of the stomach."

Case IV. (By Lanelongue).[2]—Patient twenty-three years of age; farmer; admitted at Hospital St. André, October 22, 1864. In November, 1853, in mistake for white wine, drank from a bottle some sulphuric acid. Excruciating pain in neck, breast, and stomach followed, and continued with fever and inability to swallow for eleven days. On the twelfth day a sound was introduced into the œsophagus, and broth was injected into the stomach. This was repeated for twelve consecutive days, when he was again able to swallow milk, broth, and even soup, and, after a time, solid food. For two years he experienced no other symptoms than slight pains after eating, but he now began to lose his teeth, and being unable to masticate his food, deglutition became difficult and painful. He now applied at the Hospital St. André, and for one month an œsophageal sound was introduced, with improvement. He then left, and was told to have the sound passed frequently, which he failed to do. After a time the dysphagia returned, and he was again admitted to the hospital in a greatly debilitated condition, spending most of his time in attempting to swallow. On examination, an impassable stricture was found just below the cricoid cartilage. After repeated unsuccessful attempts, a whalebone bougie, 1 mm. in diameter, was passed. The stricture was ascertained to be a cicatricial band 2 ctm. in length. Owing to the hardness and unyielding character of the stricture, progressive dilatation failed to give relief.

Not knowing of Maisonneuve's previous operations, Lanelongue conceived the plan of dividing the stricture as in internal urethrotomy, and had a urethrotome modified to the œsophagus. It consists of a metallic stem, hollow and curved, armed with a concealed blade near its inferior extremity. This blade is half elliptical, and can be thrown out 1½ ctm. It is hidden in the "opercule" when introduced, and can be thrown out either above or below it. To the lower extremity of the instrument is attached a conducting bougie to facilitate its introduction. This is made of whalebone, and has an olive point 1 mm. in diameter. On November 8, 1864, Lanelongue performed the operation by passing the stem of the instrument through the opening and sliding the cutting blade from above downward through the stricture. The instrument was then turned and two other incisions made. The operation was painless and almost bloodless. No reaction and but little pain on deglutition followed for two or three days. There was immediate improvement in deglutition, and the patient was enabled and continued to take solid food freely. Dilatation soon restored the œsophagus to its normal calibre, which continued at the end of a year, when he was last seen.

Case V. (By Dolbeau).—A young girl had, eighteen months before (in October, 1868), tried to commit suicide by swallowing sulphuric acid. Dysphagia was so great that she could only swallow broth and milk. After many unsuccessful attempts, Dolbeau succeeded, at the end of eight days, in passing the smallest of the graduated series of olive bougies, mounted on a whalebone stem made by Charrière. By progressive dilatation, the stricture could only be enlarged to five or six millimetres. Division of the stricture was then decided on by Dolbeau, and performed with an œsophagotome made by Messrs. Robert & Colin. It consists of a ball 6 mm. at the base, terminating conically, containing two concealed blades, which are regulated by a mechanism in the handle of the instrument. The divergence of the blades is exactly limited to the diameter of the ball, so as to prevent them from passing beyond the limits of the cicatricial tissue. The operation was made by passing the olive beyond the stricture, when the blades were thrown out and the stricture divided as the instrument was withdrawn. The operation was painless and bloodless. Dilatation was then resumed, and 1 ctm. was soon reached, when deglutition was rendered normal.

Case VI. (By Dolbeau).—In the year previous (1869) Dolbeau had another patient, on whom he operated for internal œsophagotomy in the Hospital Beaujon. In this case the dysphagia dated back two years, and was also the result of swallowing sulphuric acid. After progressive catheterization and dilatation, five or six millimetres only could be attained, which decided him to perform internal œsophagotomy, as in the previous case, and it was done with the same result. A dilatation of 1 ctm. was rapidly reached after the incision, allowing complete alimentation. There was no pain or hemorrhage in this case, as in the previous one, and, on being dismissed from the hospital, she was advised to make daily use of the sound.

The above two cases were reported to the Société Impériale de Chirurgie, March 16, 1870.[1]

[1] For report of above three cases vide Maisonneuve, J. G., Clinique Chirurgicale, Paris, 1864, tome ii., pp. 409 et seq.

[2] Lanelongue: Observation avec quelques considérations pour servir à l'histoire de l'œsophagotomie interne. Mémoires de la Société de Chirurgie de Paris, 1865, tome vi., p. 555.

[3] Lanelongue: Loc. cit., p. 448.

[1] Dolbeau: Gazette des Hôpitaux, Avril 5, 1870, p. 159.

Case VII. (By Trélat).—A man, thirty-one years of age, came under the charge of Trélat, at La Pitié, October, 1869, with stricture of the œsophagus, caused by drinking, May 26, 1867, in mistake for water, a glass of dilute nitric acid ("un verre d'eau second"). Violent pain followed immediately, with vomiting of black and pure blood. The next day he was relieved. Three weeks later, solid food began to be swallowed with difficulty and sometimes regurgitated. Dysphagia increased; soon liquids only could be taken with great difficulty, sometimes not for twenty-four or thirty hours.

October, 1867.—The patient sought admission at the Hospital Lariboisière, under the care of M. Verneuil. After eight months of continuous dilatation of the stricture with an ivory ball bougie, he was able to swallow very well, even some solid food, and he left the hospital; being advised, however, to use the sound very often, which he failed to do.

Dysphagia soon reappeared and he sought re admission at the hospital, July, 1869. Dilatation was again renewed, but without ameliorating the condition of the patient. An operation being evidently necessary, the patient was sent to M. Trélat. All substances taken would be retained for a few moments and then regurgitated, indicating a sac above the stricture. Very little would pass through the opening, which would only admit an olive 8 mm. in diameter. The stricture was 35 ctm. from the incisors and 1 ctm. in length. It was of an elastic, movable character, as the distance to the upper side, on passing the olive downward, was greater than to the lower side, when the olive was withdrawn. The patient's condition now became extreme, requiring active operative interference—either divulsion of the stricture, external œsophagotomy, gastrotomy, or internal œsophagotomy. The latter Trélat decided on, as the stricture was too low for external œsophagotomy. The instrument used was made by Robert & Colin, and has a total length of 60 ctm. It consisted of a graduated stem 42 ctm. long, a handle 12 ctm. long, and a terminal stem or guide 6 ctm. long, having an olive point 4 mm. in diameter. At the junction of the stem with the shaft is a half-flat bulb. Below this bulb are two blades concealed, which are thrown out, by a screw in the handle, after the instrument has penetrated through the stricture to the bulb, and the incision is made by withdrawing the instrument.

On December 2, 1869, Trélat made the first incision with the blades separated 15 mm. There were but a few tinges of blood and only a light sensation of pain in the region of the xiphoid appendix for two days after. The next day the patient could take finely chewed, solid food. Six days after, an olive, 9 mm., could be passed, and on the seventh, 10 mm.; beyond this the stricture could not be dilated.

December 16th.—A second incision was made with the blades separated 18 mm. Result as after the first incision. But little improvement followed this incision, owing, Trélat thought, to the dulness of the point of the blades.

December 31st.—A third incision was made with the blades separated 2 ctm., and sharpened to the point. No pain attended this operation, but almost immediately after the patient vomited a glassful of blood, and next day the stools were darkened with blood. With absolute rest and very cold drinks, the hemorrhage was arrested and the patient was very comfortable, excepting a soreness at the seat of the stricture on the passage of food.

January 11th.—Hemorrhage recurred, caused by straining in defecation, and again, the next day, losing about four hundred grammes. This was again checked, but the xiphoid pain continued and the patient was very weak.

January 17th.—Another slight hemorrhage without cause. Shortly after this, on taking wine or alcoholic potions, there occurred violent paroxysms of coughing, with expulsion of food and a prolonged burning pain in the region of the incision, indicating œsophagitis in this portion of the tube. On the withdrawal of wine and alcoholic potions and all irritating substances, the cough and pain subsided, and with a nutritious diet of milk, broth, and thickened potage, he regained strength and color.

February 15th.—Dilatation was resumed and an olive, 11 mm., then 12 mm., was passed. Now, instead of an annular obstacle on passing the olive, a sensation of a series of nodosities is felt.

February 28th.—No more regurgitations of mucus or food, and the patient takes all kinds of food freely and normally. Improvement continued, and, March 25th, an olive, 13 mm. in diameter, could be passed, and the patient was feeling extremely well.

(The above case by Trélat was reported to l'Académie de Médecine, March 8, 1870.[1])

(To be continued.)

ON THE

RADICAL CURE OF HERNIA BY HEATON'S OPERATION.[2]

By WILLIAM T. BULL, M.D.,

SURGEON TO ST. LUKE'S AND THE CHAMBERS STREET HOSPITALS, NEW YORK.

Dr. George Heaton, of Boston, was known to have effected many cures of hernia by a method of treatment which he did not make public till a few years before his death, when he published a book on the subject.[3] This method, which he calls that of "tendinous irritation," consists in a "mild irritation of those portions of fibrous tissue lying directly in contact with the neck of the hernial sac, thickening and consolidating their substance, and effecting a contraction of the openings." It is insisted upon that only a moderate "irritation" shall be produced, and that such an amount of inflammatory reaction as is shown by suppuration, or constitutional disturbance, or redness, heat, pain, or swelling for more than a few hours is to be avoided. The irritant used is a fluid made up of the solid alcoholic extract of quercus alba, fourteen grains; Thayer's fluid extract of quercus alba (prepared in vacuo), half an ounce, triturated with heat till as perfect a solution as possible is made. To this, sulphate of morphia, gr. j. to the ounce, is added. (For hernia with very large openings, he recommends a semi-fluid mixture of the solid and fluid extracts.) The operation consists in injecting the fluid, by means of a metallic syringe with solid piston, and short, strong needles (which I now show you), into the fibrous tissues overlying the sac and forming the walls of the inguinal canal. The sac is reduced, if possible, but it

[1] Trélat, U.: Sur l'œsophagotomie interne dans les rétrécissements cicatriciels de l'œsophage. Bulletin Général de Thérapetique Médicale et Chirurgicale, Paris, 1870, tome 78, p. 252. This article also contains an illustration of Trélat's œsophagotome.

[2] Read before the New York Surgical Society, October 10, 1882.

[3] The Cure of Rupture, Reducible and Irreducible, also of Varicocele and Hydrocele, by New Methods. By George Heaton, M.D. Edited by Dr. J. Henry Davenport. Boston: H. O. Houghton & Co. 1877.

is admitted that in the majority of cases this cannot be done. After invaginating the scrotum into the external abdominal ring with the right forefinger, the left is pressed perpendicularly over, and into the ring, forcing the spermatic cord to the inside, so as to feel the edge of the external pillar of the ring, separated from the finger only by the skin and subcutaneous fat. The needle, with the syringe attached, is then thrust perpendicularly through the integument, and after passing, but not touching the external pillar, is carried upward in the direction of the canal (the finger being withdrawn) as far as its uppermost limit. Ten to twenty minims of the fluid are injected, the point of the needle being swept about over as large an area as possible, and the instrument rapidly withdrawn, so as to leave no fluid in the subcutaneous tissue. A compress and bandage are applied at once, and the patient kept recumbent for eight or ten days (or till the local tenderness has disappeared), and then allowed gradually to resume his usual avocation, wearing the bandage or a truss for six or eight weeks or three months. If the hernia has not reappeared at the end of this time, the support may be discontinued. If it recurs, a second operation is to be performed. This, in Heaton's words, happens in from one-third to one-half of all the cases. The same method, with slight modifications, he applied to umbilical and femoral herniæ with good results.

My own experience with the operation began in 1879, when Dr. Knight and Dr. Gibney, of the Hospital for Ruptured and Crippled, kindly referred some patients to me. I first satisfied myself that it was possible to deposit the fluid in the proper place without entering the peritoneal cavity, by four operations on cadavers with large inguinal canals, and then operated on every patient who would submit, repeating the injection, when possible, in case of failure. In all, I have performed the operation on forty patients, but I can report the ultimate result in only twenty-one of them, since the remaining nineteen have not been seen since leaving the hospital, and extended search has failed to find them. Counting in repetitions of the operation, and operations on both sides, there have been forty-nine operations in these forty patients without any serious disturbance. It is, hence, to be considered perfectly safe, and furthermore, unlikely to be attended with more than trifling local, and no constitutional reaction. In only one case was there enough local inflammation to warrant the application of a cooling lotion for a few days. No swelling has been perceptible externally, but a plug of induration has generally been felt over the site of the canal, which has disappeared within two weeks. Tenderness has persisted for periods varying from four days to two weeks. The pain at the time of injection has been considerable, but has seemed to me to depend largely upon the temperament of the patient. In only three cases has ether been used. General abdominal pain, mostly a dull aching, has required for a day or two one or two hypodermics of morphine. A very light epididymitis has followed the operation in six cases, which subsided in two or three days. One patient had retention of urine for five days, and in another the rupture (an omental one) came down the day after the operation, and was irreducible for a month. Once the needle broke off at its shoulder, but was easily extracted through a slight skin incision. The diet has been moderated only in quantity, and no effort has been made to confine the bowels, which have generally moved spontaneously after two or three days, or, if longer confined, have been moved by enema. In most cases, I have had no idea whether the sac has been returned or not. Probably, in herniæ that have existed for more than a few weeks, the sac is adherent, and is merely invaginated, and the fluid is deposited between it and the internal surface of the fibrous walls of the canal. In the cured cases, according to Heaton, it gradually atrophies. I do not think it is likely to be penetrated by the needle, for on the introduction of the latter, it is pushed aside, together with the spermatic cord, by the finger, and as the needle traverses the canal, its point can be directed away from the sac and against its fibrous envelope. I have never had any reason to think that fluid has been deposited in the peritoneal cavity.

The operation is easy, except in fat subjects with small openings, and in these, I confess, I should have no very definite idea as to the position of the needle. I have not always found it easy to feel the external ring by thrusting the left forefinger *vertically* into it, and have generally preferred to incline it slightly and to flex the terminal phalanx so as to make it partly enter the ring and serve as a guide for the needle when it is about to be passed up the canal. Heaton's syringe has been found satisfactory, but it is more easily manipulated when furnished with a collar of roughened metal about its middle, as was suggested by Dr. Weir. I find a needle a trifle longer than that used by Heaton the most convenient. These, made by Schmidt, are two and a half inches long. In the after-treatment the bandage has answered every expectation, but when the patient walks about I think a truss, which does away with a perineal strap, is preferable. I have preferred to use a pad made of rubber adhesive plaster, owing to the difficulty of keeping a cloth pad in place.

I am sure that it is of the utmost importance to keep the pad and bandage carefully adjusted while the patient is in bed, and constant watchfulness is necessary for this end. An intelligent patient can help his own cause materially after being instructed, and is more to be relied upon than the average interne or nurse. Especially is this the case when he begins to move about, for it is imperative to avoid all severe efforts at the outset, and to very gradually resume ordinary occupations. Bad judgment, or inattention to details which have been given, will very often imperil, if not destroy, the efficiency of the operation. I am so much impressed with the importance of this factor in effecting a cure, that of two patients with similar herniæ, I would give twice the number of chances of success to the one who had intelligence enough to comprehend what was being done for him, and self-control and "gumption" enough to carry out instructions faithfully.

I pass now to a brief statement of the twenty-one cases, the result of whose treatment I have been able to learn.

CURED.

Case I.—A clerk, aged eighteen, has right oblique inguinal hernia (incomplete) of uncertain duration. Mass, equal to one joint of little finger, descends into canal. Easily reduced, no truss. Bandage discarded five months after operation. Examined one year and nine months later and no sign of return. Ring as patent as on other side.

Case II.—A gardner, aged twenty-one, with right oblique inguinal hernia, congenital and com-

plete. Projects into scrotum as large as horse-chestnut, apparently intestinal, once irreducible for several hours. No truss. Now easily replaced, and ring admits tip of index finger. After operation a truss for three months, then bandage for three more. Nine months after the operation I could find no sign of the rupture, and the ring was smaller. Two months later Dr. Jayne, of Cold Spring, who recommended the operation to him, wrote me that he had examined him and that he considered him cured. He does hard manual work.

CASE III. — A banker, aged thirty-one, with right oblique inguinal hernia (complete) of nine months' duration. Mass, like elongated horse-chestnut, projects into scrotum. Easily replaced. Has worn truss, on removing which rupture descends. Tip of index finger admitted into internal ring. After the operation a *lighter* truss (made by DeGarmo & Co.) was worn for four months. No descent when it was removed at odd times. Shortly after the operation he developed caries of the spine. In order to wear a spinal brace the truss was discarded. A month later he died ; but in the interval there was no return of the hernia, although he was walking about and constantly troubled with violent cough. Patient of Dr. Andrew J. McCosh.

CASE IV. — A bookkeeper, aged twenty-six, a patient of Dr. L. Bolton Bangs, has had a hernia nineteen years. It is a right oblique inguinal hernia, and forms in the scrotum a tumor the size of a small orange, apparently intestinal and omental. Easily reduced. Opening admits index finger. Has worn truss irregularly. Two operations in seventeen days, after which truss was worn for five months, but with very much less pressure than before. For three months past it has been discarded the greater part of the time. There has been no descent ; though the canal and ring are but a trifle smaller than before.

CASE V.—A waiter, aged thirty, has had an oblique inguinal hernia for five weeks. Has worn truss, but it comes down five or six times a day, as large as a horse-chestnut. Ring admits index finger. Fourteen days after operation there was a slight descent. Second operation, after which he returned to work. A year later the patient stated that he had discarded the bandage six months previously, and that there had been no relapse.

In all of these five cases there was no descent of the hernia from the time of the final operation. Although the time which elapsed since all support was discarded is somewhat short in Case III., I consider it a cure, because of the unusual strain from coughing, which the abdominal walls withstood. Case V. I have not been able to examine, but have every confidence in the intelligence of the patient. That truss or bandage was worn for so long a time after operation in these cases is due to the patients, rather than myself. They were indisposed to lay them aside, because they felt that they were cured, but that if there was a relapse their condition would be worse than before. This I can say has *never* been the case, as will be seen from a consideration of the cases that I think it fair to call improved. They are seven in number. Cases VI. and VII. seem to be practically cured, but I have ventured to call them only improved, since they are still wearing a support.

IMPROVED.

CASE VI.—Printer, aged twenty-three, with oblique inguinal hernia (incomplete) of nine months' existence, the size of a small sausage in canal. Has worn truss, but it descends readily on removing it. Little finger only can be passed into canal. After operation a bandage only was worn. A year and three months later he persisted in wearing bandage, and was under the impression that the hernia had been down "once or twice," but it could not be made to descend and the ring was apparently closed.

CASE VII.—Lawyer, aged thirty-three, a patient of Dr. V. P. Gibney, had a direct inguinal hernia of two years' standing, which filled one-half of the scrotum. It could be easily reduced, but truss would not control it. Opening admits index-finger. Two operations in fourteen days, and bandage only applied. While wearing this a small indistinct protrusion would occur beneath the pad, and he was referred to Dr. G. for a truss. One similar to that worn before the operation was applied, with the addition of a perineal strap. Thirteen months later Dr. Gibney reports, "No appearance of tumor even on coughing. Not as much impulse as on the sound side. Can not get tip of little finger into ring."

CASE VIII.—Porter, aged thirty-three, with double oblique inguinal hernia, for which he has worn double truss ten years. On right side the protrusion descends as large as a hen's egg beyond the external ring, on the left it merely "pouts" through the internal ring. Truss does not control the right one satisfactorily. Operation on both sides at once. Two weeks later resumed work with the same truss. Nine months later he reports that he is much more comfortable. The left rupture has not materially changed, but the right has descended only two or three times, and then only when truss was off. On coughing it does not come outside of canal.

CASE IX.—Surveyor, aged eighteen. Has noticed for eight days a protrusion which distends the left inguinal canal on coughing. No truss. Ring admits tip of index finger. Truss after operation. Nine months later hernia could not be made to descend, and the ring seemed to be closed. A rupture now exists on the right side, and a double truss has been worn for three months. Operation on the right side. At present, eighteen months after the first operation, he still wears truss. The left hernia came down a year, the right two months after the operation. Both are controlled by truss and can not be made to do more than just protrude through the internal ring, which feels smaller than before.

CASE X.—Laborer, aged forty-seven, with oblique scrotal hernia and hydrocele. After tapping hydrocele, hernia as large as goose-egg. Ring admits index finger. Descent after first operation. Second operation a month later. Truss. No relapse. Hydrocele tapped again and injected with tinct. iodine. Six months later hydrocele tapped again. Ring smaller, and a mass only as large as horse-chestnut could be forced out. One year after the operation, after tapping the hydrocele again, the hernia was found in the same condition. A third operation was proposed, together with antiseptic drainage of the tunica vaginalis.

CASE XI.—Laborer, aged fifty-six, with right oblique inguinal hernia, existing eighteen months, and descending into scrotum as large as a hen's egg. Opening admits index finger. Has worn truss, but suffered much from feeling of weakness, and rupture has come out on coughing in spite of truss. After operation, same truss. Nine months later he reported that the rupture had descended but once, and was then only half as large as before, and that he was perfectly comfortable with the truss. On

coughing a protrusion somewhat smaller than a horse-chestnut filled the canal but did not emerge from it, and the ring would admit only the tip of the index finger.

Case XII.—Clerk, aged thirty-two, with oblique inguinal hernia of four years' standing. Ring admits index finger and hernia is of the size of small banana, reaching into scrotum. Worn truss irregularly. Admitted to hospital for strangulation, which was relieved by taxis. Operation four days later. Bandage. Descent six weeks afterward on lifting a heavy package, and incarceration, relieved by taxis. Second operation after five days. Discharged wearing bandage. Two years and a half from date of last operation patient wrote that he had had no further trouble from the rupture in any way, but wore a truss on account of a rupture on the other side.

The improvement in these cases is shown in their being made more controllable by a truss, in the diminution of size of the hernial orifices, and that of the hernial protrusion. A repetition of the operation might be expected to effect a cure in cases VIII., IX. and XI.

It is because the operation has not been repeated in the following four cases, and because there was a decided improvement for a while that I am tempted to report them as temporarily improved, rather than as absolute failures.

TEMPORARILY IMPROVED.

Case XIII. — Errand-boy, aged fourteen, with right oblique inguinal hernia reaching into scrotum, the size of hen's egg. (Intestinal?) No truss. Came down two months after operation, half as large as before. Induration exists in tissues of cord outside of external ring. (Operation probably imperfectly performed.)

Case XIV.—Shoemaker, aged thirty-six, with right inguinal hernia of fourteen years' duration. Truss. Size of goose egg. Ring admits tip of index finger. Relapse at end of a year while wearing bandage.

Case XV.—Clerk, aged twenty-five, with left oblique inguinal hernia, existing five years, as large as the thumb and projecting beyond external ring. Descends under truss on making exertion. Has been larger. Ring admits tip of index-finger. Bandage for six months. Relapse shortly after removing it.

Case XVI.—Dressmaker, aged eighteen, with double femoral hernia on one side, of six years' standing, and as large as a small orange when down, on the other of two years' duration, and of the size of a hickory-nut. Wears a double truss, in spite of which ruptures give great annoyance, and is unable to do house-work. Operation under ether on one side, followed in three weeks by operation on the other side, without ether. Considerable induration in femoral canal. Four months later the truss would control both herniæ, and the larger one descends only on coughing. Six months after operation rupture as large as before but controlled by truss, except on making severe muscular efforts. Induration has disappeared from canal, and rings are about as before.

FAILURES.

In the five cases which follow, the rupture descended on the patient's getting up, or within ten days later.

Case XVII.—M——, aged seventy-three, with large scrotal hernia retained by truss only when he moves about very quietly. Ring admitting two fingers.

Case XVIII.—M——, aged four and one-half. Congenital scrotal hernia down most of the time, size of small orange. Ring admits tip of index-finger. Ether.

Case XIX.—Laborer, aged fifty-one, with scrotal hernia size of fist, existing eighteen years. Truss uncertain. Opening admits two fingers.

Case XX.—Farmer, aged fifty-three, with scrotal hernia size of two fists, existing ten years. Opening admits middle finger. Truss fails to control it. [Operation repeated by Dr. Weir a month later, with no better result.]

Case XXI.—Porter, aged thirty-four. Right inguinal hernia (direct) of six years' duration, large as fist, omental. Opening admits one-half of index-finger. The day after operation the hernia came down and could not be replaced. No strangulation. Efforts under ether unsuccessful. In bed for a month; poultices followed by elastic compression. Tumor gradually reduced in size till it formed a firm adherent "plug" as large as a hen's egg, over which a truss could be worn with comfort.

SUMMARY.

Forty-nine operations have been performed on forty patients, only twenty-one of whom have been followed long enough to learn the result. Five have been cured, seven improved, four temporarily improved, five have not been improved at all.

It will be seen that all the cases have been inguinal hernia with one exception. I can hence only speak of the applicability of the operation to this form of rupture. The number of cases is too few to enable me to draw any but the most general conclusions; and I find these so tersely formulated by Dr. George W. Gay, of Boston, as the result of his own experience with fifteen cases ("23 operations, 4 cured, 8 relieved, 3 unrelieved"), that I can not do better than quote them, and express my coincidence with them. He says, at the close of a paper read before the Suffolk District Medical Society, November 19, 1881,[1] "I know nothing of the merits of the operation in other kinds of hernia, but in the one under consideration I can but conclude that it is safe. It is not very painful; it is not very difficult to perform; it does little harm, even if it does no good; it will cure a certain number and will relieve others." From my own experience I feel justified in recommending the operation, and I am sure that in another series of twenty cases I could greatly improve on this record. I hope that the experience of other members of this society will contribute further to our knowledge of the possibilities of the operation, and incite the profession at large to further study of its advantages.

I have limited this paper to my own experience with Heaton's operation, but before closing, it is proper to call your attention to what has been claimed by other operators with modifications of this method. Dr. Joseph H. Warren, of Boston, in "A Practical Treatise on Hernia"[2] recommends an instrument of his own invention and the following fluid for injection:

℞. Fl. ext. querci albæ.....	ʒ vi.[3]
Alcohol (ninety per cent.).....	ʒ iss.
Ether sulph.....	ʒ ij.
Morph. sulph.....	gr. iv.
Tinct. verat. viridis.....	ʒ ij.

M. Sig.—Inject 15 to 20 drops in small and recent herniæ, but 25 to 50 drops in large or old herniæ.

[1] Boston Medical and Surgical Journal.
[2] Boston: James R. Osgood & Co. 1883. Second edition.
[3] Reduced by distillation to ʒ ij.

He uses a rubber bandage after the operation. He had among his first twenty-nine cases "some failures," but says, "in my last cases, out of more than the same number I have not had a single failure" (p. 385). He also quotes these results reported by Dr. H. S. Greeno, of Kansas City, Mo.: Cases operated on, 97; reported cured, 91; failures, 6; number reported who have abandoned the use of trusses, 56. And he reports from Dr. W. H. Heath, of Buffalo, N. Y., Assistant Surgeon United States Marine Hospital Service, twelve cases operated on, with nine permanent cures. Schwalbe,[1] of Magdeburg, reported to the last Congress of German Surgeons thirty-four cases cured by injections of alcohol.

Progress of Medical Science.

CURE OF HYDATID CYSTS BY CAPILLARY PUNCTURE.—Dr. Allesandro Borgherini reports *in extenso* the histories of four cases of echinococcus cysts treated by capillary puncture and withdrawal of a small quantity of fluid. Of the four cases three were cured, but in the other a second puncture with complete evacuation of the cyst was necessary. The punctures were made with the needle of a hypodermic syringe and the amount of fluid withdrawn was from one-half to two drachms. A slight elevation of temperature followed the operation in every instance, but in one case only did the fever continue for any length of time or rise to any considerable height. Improvement did not follow until from eight to fifteen days after the punctures were made. The author thinks that possibly the cure is brought about by the altered tension caused by the abstraction of a small amount of fluid and the consequent disturbance of osmosis, a process by which the parasite obtains nourishment. Or possibly the slight puncture acts as a traumatic cause to impair the vitality of the parasite.—*Gazzetta Medica Italiana*, August 5 and 12, 1882.

ACUTE CIRCUMSCRIBED ŒDEMA OF THE SKIN.—Dr. Quinke describes (*Monatshefte für praktische Derm.*, No. 5, 1882) under this name, a disease which bears striking resemblance to so-called giant urticaria. The malady manifests itself by the appearance of œdematous swelling of the skin and subcutaneous cellular tissues in circumscribed spots, of from two to ten centimetres in diameter. These tumors show themselves most commonly upon the extremities in the neighborhood of the joints, but may also come upon the body and face, in the latter region more particularly in the lips and eyelids. The swollen portions of skin are not, as a rule, reddened, but are pale, rather translucent in appearance, and not sharply defined. The subjective sensation is that of tension, itching being rarely felt. The mucous membranes of the lips, soft palate, pharynx, and entrance to the larynx may also be invaded by similar swellings, and to such an extent that difficulty in breathing ensues. One case, in which were manifested gastric and intestinal symptoms, suggests that the mucous membranes of these organs may be also affected. In another instance repeated serous effusions into the joints took place. Coming on suddenly, and, as a rule, simultaneously, in different regions, these swellings, after an existence of from several hours to a day, disappear with equal abruptness. By reason of the appearance of successive crops of such lesions, the malady, as a whole, may be prolonged for several days or weeks. The general health is generally undisturbed, but in some cases there was indefinite prodromal indisposition, and during the existence of the eruption heaviness of the head, thirst, and diminution in the quantity of urine. A rise in the temperature of the body was never observed. Once having been attacked, the individual is subject to recurrences of the disease, usually in the same regions of the body, sometimes at regular, sometimes at irregular, intervals of time. The affection appears oftener in men than in women. The patients were, as a rule, healthy in other respects, some of them of nervously irritable temperament. In one instance the malady was inherited by the child of the patient, the disease manifesting itself during the first year of life. This affection is to be classed among the angio-neuroses. Prophylaxis consists in regulation of the general condition, more especially of the digestive functions. Atropine seems to be of some service. In several instances scarification was necessary on account of œdema of the larynx.

[1] Beilage zum Centralblatt für Chirurgie, No. 29, 1882, page 58.

BROMIDE OF POTASSIUM IN VESICAL CATARRH.—Dr. Ciancosi claims excellent results in the treatment of vesical catarrh by bromide of potassium in doses of one-half to three grammes daily. He explains its effects primarily by its depressing action on the vaso-motor nerves and the cardiac plexus, producing a general ischæmia of the entire organism. In addition, a local action is exerted on the vesical mucous membrane from the presence of the salt in the urine. It has been found in this fluid ten minutes after its administration by the mouth.—*La Union Médica de Carácas*, July 16, 1882.

THE PORRO OPERATION IN ITALY.—Dr. Negir has published in the *Annali d'Ostetricia* some statistics concerning Porro's operation in Italy. Up to March, 1882, there had been thirty-eight operations, in fourteen of which recovery ensued and in twenty-four the patients died. Of the fourteen recoveries, six belonged to eight cases operated upon in the Maternità in Milan. These results cannot be said to be very encouraging, though the mortality may be reduced in subsequent operations.—*Racoglitore Medico*, August 20, 1882.

A PERITUBULAR LYMPHATIC SHEATH IN THE TESTICLE.—Professor F. Legge has discovered that the seminiferous tubules are invested with a lymphatic sheath, to which he gives the name of peritubular. It is formed of a continuous endothelial layer surrounding the tubule, whose surface is also covered with a similar layer of endothelium. Between the sheath and the tubule is a free space in which can be seen a number of lymph-corpuscles. This peritubular sheath can be most readily distinguished in the smaller animals, but the author has established its existence also in dogs, sheep, and man.—*Gazzetta Medica di Roma*, August 1, 1882.

THE THERAPEUTICAL EMPLOYMENT OF MAGNETISM.—Dr. D. Luis Barraquer, in *La Gaceta Médica Catalana*, August 15, 1882, favors the therapeutical application of magnetism, asserting that in many cases more speedy and definite results are obtained from its use than from that of electricity. He employs a powerful electro-magnet, capable of sustaining a weight of two hundred and fifty to three hundred pounds. The author relates the histories of two

cases in which definite lesions existed, and in which marked relief followed the application of the magnet. The first case was one of cerebral hemorrhage with consecutive hemiplegic contractures. The hemorrhage had occurred three years previously. One application of the magnet was followed by visible improvement, and after four sessions the forearm and fingers could be fully extended. The second case was that of a boy suffering from deafness, due to middle-ear disease following measles. Galvanism had been employed eight times with the effect of increasing the hearing distance from 0 to 1 foot. Magnetism was then tried, and, after a sitting of half an hour's duration, the hearing distance was increased to three feet. At the fifth session the watch could be distinctly heard at a distance of fifteen feet.

Iodoform in Chronic Broncho-Pulmonary Affections.—Prof. Chiaramelli claims for iodoform an almost specific action in pulmonary phthisis. It should be given in one-tenth-grain doses two or three times a day. The author believes that it lessens the amount of the expectoration and improves its character. At the same time the fever is reduced. The drug is also of value in the chronic bronchitis of the aged and in bronchorrhœa with pulmonary emphysema.—*Gazzetta Medica di Roma*, August 15, 1882.

Extirpation of a Mammary Adenoma with Continuance of the Gland Function.—Dr. José Armangué, in *La Independencia Médica*, August 21, 1882, reports the case of a woman, thirty years of age, who suffered from a large tumor of the breast. The integument covering it was normal, there was but little pain, and the axillary glands were not enlarged. The tumor, an adenoma, measured when removed seven and one-half inches in length and width by two and one-half inches in depth. The nipple was situated in its vertical axis at the level of its upper and middle thirds. This was dissected away from the tumor and left attached to the integument. After the healing of the wound all that remained of the mamma was a small portion of apparently atrophied gland tissue in the upper part. Two years later the woman became pregnant, when the breast began to enlarge, and, after delivery, secreted milk in abundance, the child being suckled indifferently with either breast.

Insanity Cured by Erysipelas.—Dr. Fritsch (*Jahrbücher für Psychiatrie*, vol. iii., 1882) reports two apparent cases of melancholia, which recovered after being attacked by a delirium resulting from erysipelas. The first patient had markedly depressing delusions but no hallucinations. The second patient had both hallucinations of hearing voices through a telephone and depressing delusions. The second case seemed to have systematized hallucinations, and although Fritsch says she was cured, she continued to be "nervous." It is probable that this was a case of monomania, and the supposed recovery a remission due to the erysipelas. He also reports a case of progressive paresis, which was markedly improved by erysipelas. Fritsch's cases, though quite interesting, are not exceptional, as similar ones have been reported by Esquirol, Sponholz, Nasse, and Macleod. That acute febrile disturbances sometimes exert a favorable influence on insanity has long been known.

Progressive Paresis.—Dr. Cullère, after an extended examination of progressive paresis, or, as he prefers to call it, dementia paralytica, in its relations to arterial atheroma and yellow softening, comes to the following conclusions: First, there exists a form of progressive paresis which is characterized at one and the same time by the ordinary lesions of meningo-encephalitis, and by those of cerebral senility, atheroma, miliary aneurisms, and patches of yellow softening. It is developed at an advanced age, follows a more or less slow course, and may rapidly terminate at the end of a congestive attack accompanied by acute maniacal excitement. It may be diagnosed during life by aid of the sphygmograph and aortic auscultation. The psychical and somatic symptoms waver between those of senile dementia and progressive paresis. Secondly, among certain senile dements there occur congestive attacks, which lead to inflammation of the cerebral cortex, and produce lesions, macroscopic at least, of progressive paresis. These fluxionary changes retrocede at times, and the symptoms of progressive paresis disappear, to give free play to those of organic dementia.—*Annales Medico-Psychol.*, 1882.

Action of Piperidin and Coniin.—Dr. Kronecker has made some comparative experiments upon the toxicological relation of piperidin and coniin, and found that between these two drugs a remarkable parallelism existed, as both substances are poisonous to nerves, paralyzing them. A parallelism also exists in their chemical reactions. Piperidin mainly paralyzes the sensory; coniin, like curare, the motor tract. Dr. Fliess has studied this more in detail, with the following results:

First—Piperidin.—In medium doses ($\frac{1}{6}$ of a grain) it removes the reflex irritability in about ten minutes. The reflex time by small doses is at first lengthened, and soon becomes normal. The inhibitory apparatus in the brain is not paralyzed. The central nervous organs are not paralyzed. The motor nerves are not affected. The paralysis is in the peripheral termination of the sensory nerves. Piperidin in large doses arrests respiration in frogs for a minute. The pulse-frequency after small doses of piperidin sinks to about two-thirds of the normal number. When piperidin is directly conducted through the heart it removes the heart-beat, but the muscular substance is not injured.

Second—Coniin.—It paralyzes first the peripheral ends of motor nerves; later, the centre. In the beginning it calls out an excitation of the inhibitory apparatus. The convulsions seen in warm-blooded animals do not appear in frogs, on account of the paralysis of the motor nerves. The frequency of the breathing is first increased and then diminished. The pulse-rate after small doses is also diminished. When coniin is conducted through the heart it does not affect the cardiac muscle.—*DuBois-Reymond's Archiv*, 1882.

Treatment of Gangrene of the Intestine.—At a recent meeting of the New York Medical and Surgical Society, Dr. Weir raised the question of treatment in intestinal gangrene, by relating the following case: About ten days ago a woman, aged thirty-five, was seen by him in consultation. Her physician stated that on the 10th of May last she was seized with colicky pains and vomiting. Passing his hand over her abdomen, he could discover no hernial tumor, but, as there was apparently intestinal obstruction, he gave opium freely, and repeatedly administered enemata. After four or five days a free movement of the bowels took place, and she

felt relieved. He discovered, the day before Dr. Weir saw her, a tumor in the left groin, and the patient then told him that this had first appeared, although temporarily, the preceding August. Dr. Weir found, on examination, that the tumor had all the signs of a stercoraceous abscess just below the femoral opening on the left side. On incising it, fetid pus and fecal matter were discharged. The sphacelated portion of gut, about an inch long, was laid open freely, and, as the fæces had free vent, nothing further was done. The patient was entirely relieved, and the sloughing cellular tissue had since come away, leaving a fistula discharging biliary matter. Dr. Weir thought that an artificial anus in this locality would be more likely to heal than if it had been at the site of an inguinal hernia. He found that the statistics of resection of gangrenous intestine, as done by Czerny and Gussenbauer, gave only about thirty-five per cent. of recoveries. He asked whether it were better simply to slit up the strangulated portion of intestine, hoping that the artificial anus would heal of itself, or, as had more commonly been done of late, to remove the gangrenous portion, and unite the upper and lower healthy segments. He believed that the older method would be preferable in most cases, and that the resection would be suitable for gangrene, either where it was so recent as to be unguarded by adjacent adhesions, or was due to an internal strangulation.—*The New York Medical Journal and Obstetrical Review*, October, 1882.

Muscarin.—Högyes has made experiments upon animals with muscarin and has arrived at the following results:

First.—Muscarin increases the excitability of striped muscle-fibre.

Second.—It depresses very rapidly the functional activity of the central nervous system, and lessens the excitability of the peripheral nerves.

Third.—The dilatation of the blood-vessels after an injection of muscarin is an immediate result of the paralytic action of this poison on the vaso-motor centre. Later, there ensues a depression of the activity of smooth muscle.—*DuBois-Reymond's Archiv*, 1882.

Cerebro-spinal Meningitis in a New-born Infant.—A young woman became affected with cerebro-spinal meningitis at the end of her pregnancy. She died after having given birth to an apparently healthy child, which presented, two hours later, symptoms of meningitis, followed rapidly by death. —Bambas, in *Progrès Médical*, No. 17, 1882.

Rapidity of Nerve-Force.—René has recently made experiments upon the rapidity of the transmission of nerve-force, and found it in man, as a mean, to be twenty metres per second. All the numbers expressing the rapidity of nerve-force in nerves, either sensory or motor, exhibit considerable differences, according to the individual, or the procedure, or the region excited, or even in the same individual. The intensity of the excitation is of great importance, the rate of transmission augmenting with it, especially in sensory nerves. For the motor nerves, when the excitation becomes strong, the rapidity diminishes. In locomotor ataxia there is a considerable retardation of rapidity of transmission of nerve-force, whilst in the beginning of general paralysis the rate is more rapid than normal.—*Gazette des Hôpitaux*, No. 46, 1882.

Noma Pudendi.—In the October number of the *New York Medical Journal and Obstetrical Review*, Dr. Anna Lukens reports a case of noma pudendi, which terminated in recovery. The patient was a female child, mulatto, three years of age, previously healthy, excepting an attack, when two years old, of acute articular rheumatism, complicated with endocarditis, from which she recovered with permanent mitral insufficiency. For six months previous to her last attack of illness the child's general health was remarkably good. On May 10, 1882, it was reported that she had been very restless and feverish, having had a chill the previous night. Attention was directed to the genital organs, which, upon examination, revealed a condition closely resembling aphthous vulvitis. The patches covered nearly the entire mucous surface of the labia majora and surrounding parts. The whole surface was of a grayish color, and covered with a thin gray discharge exhaling an exceedingly fetid odor. Sloughing of the parts occurred soon after, and increased rapidly, involving the perineum and extending back beyond the sphincter ani, and for more than an inch behind the anus. The inguinal glands were not affected.

The general condition of the child at this time was very unfavorable. There was great prostration, with complete loss of appetite, thirst, restlessness, and high fever, the temperature in the rectum ranging from 101.5° F. in the morning to 104° in the evening. The pulse was feeble, small, and frequent. The parts were swollen and extremely sensitive. Micturition was painful. This condition continued for three days, when a detachment of the eschars occurred, leaving a deep furrow on each side of the anus, with sharply defined, irritable edges. The right labium continued swollen and grangrenous for several days later. The constitutional symptoms began to subside soon after the separation of the slough occurred. Healthy granulations sprang up, and the healing process went on quite rapidly. In three weeks from date of attack the entire surface was healed, but not without considerable deformity. The sphincter ani was entirely destroyed, also a portion of the perineum. An irritable ulcer occurred within the rectum.

The local treatment consisted, first, in bathing the parts with carbolized water, afterward dusting them thickly with iodoform, with no other effect than correcting the fetor. Balsam of Peru was next applied, but with no better result. After this a preparation consisting of equal parts of pulverized gum, camphor, and balsam of Peru was applied twice daily, and the parts were covered with carbolized cotton and bandaged. The latter treatment gave apparently excellent results, as the progress of the disease was arrested, and the slough began to separate soon after and was rapidly detached. The constitutional treatment consisted in giving tincture of the chloride of iron and chlorate of potassium with quinine and stimulants.

Noma was not recognized by the older writers, but was, according to Bamberger, first described by Battus, a Dutch physician, in the beginning of the seventeenth century. The disease is one of unfrequent occurrence. West observed but seven cases among thirty thousand sick children, six of which terminated fatally. Vogel remarks that he has seen but five cases, of which only one ended in recovery. He also states that from eighty to ninety per cent. of the patients with noma perish in a few days. Noma pudendi appears to be of even rarer occurrence than noma of the mouth, or cancrum oris.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, November 11, 1882.

HEATON'S OPERATION FOR HERNIA.

We are all familiar with the remark of the renowned preacher, that it was neither right nor proper that Satan should monopolize any of the good tunes. It is consequently said that his choir was celebrated for its choice singing. The quacks, or rather such as we generally view as quacks, are in many ways in the same relation to us as was the Evil One to the candid and practical dominie. Hence, also, we are beginning to inquire into the reasons for the success of men whose ways are apparently dark, and whose tricks are mean. And often we do so with benefit. Several years ago a London surgeon was bold enough, in a little book on bone-setting, to say that he had fathomed some of the secrets practised by one of the professionals in that line; and more, that he had received instruction of the arch-innovator himself. And his book was a readable and instructive one, proving, as science is always capable of doing, that the days of miracle are passed, and that tact and common-sense are at the bottom of every success. The little work may have been read under protest, but still the facts it disclosed were useful all the same.

Whether emboldened by this example or not, it is certain that since then many reputable men have taken occasion to investigate other matters of quackery and give science any advantage which may come of it. For instance, the popular treatment of piles without pain has been rationally explained by the hypodermic injection of carbolic acid. Then, again, the so-called cancer cures have been duly weighed in the balance of experience, and even the anointing oil of the popular Hebrew saint has been subjected to the searching analysis of a distinguished chemist.

Several years ago the surgical world was somewhat surprised to hear it whispered around that a man named Heaton actually cured some cases of hernia by simply injecting a fluid along the inguinal canal, thereby producing an inflammatory exudation which plugged up the said canal. The facts were stubborn, and when opportunity offered the method was conscientiously studied by Davenport, who published a little work on the subject, with the consent of the author, who furnished him the data. It was then discovered that the fluid used was mainly a decoction of white oak-bark, and that the operation for its introduction was comparatively simple.

There were two elements that lent mystery to these cures, viz.: the secrecy of the preparation used and the pretension of special skill in the performance of the operation. Both of these mysteries were solved, and by various articles in the journals the means of cure were placed in the hands of every surgeon who desired to operate by that method. In all frankness it behoves us to say that the operation does sometimes cure; not in any such proportion as claimed by the originator, but certainly enough to claim for it a recognized means to a desirable end. In Dr. Bull's elaborate and practical paper in the present number the general average of good results equals a little less than one-third. This, taking into account the general run of cases, may safely be considered the average experience of other surgeons. The paper in question will tend, however, to increase the statistics of the operation for hernia by directing attention anew to the Heaton method, and popularizing it, so to speak, among surgeons who, not believing in it, were not disposed to try it.

It does not appear to be necessary to use the oak-bark mixture as an injection, as alcohol has answered equally well in the hands of Schwalbe and others, and there seems to be no good reason for supposing that pure carbolic acid may not be utilized in the same way. At least the experience of Levis in his treatment of hydrocele by injection of the latter acid should have considerable weight in weighing the chances. But whatever fluid may be used, the method of injection is fortunately quite simple, and is unattended with danger in the hands of any competent surgeon. It is hardly to be expected that the percentage of cures will be increased, but even as it is the gain is something.

THE HOME PRODUCTION OF QUININE.

The "protective" atmosphere of Philadelphia makes itself felt even in the medical profession. While one journal is ardently advocating the re-establishment of a duty upon quinine, another now starts a propaganda in favor of the home cultivation of quinine-bearing plants. We are an ague-ridden people, according to the Philadelphia *Medical Times*, and were it not for quinine, ten per cent. of the population in some parts of the country would be sick every autumn. Three autumn months without qui-

nine would probably witness, says our contemporary, more deaths from malaria in the United States than yellow fever has caused among us during the century. Over a million of ounces of quinine, on an average, are used every year in the United States, which is very nearly a full anti-periodic dose to every inhabitant. It is a question of much importance, therefore, to have this drug cheap. Furthermore, says the *Times*, in a somewhat startling manner, what should we do if our supplies were cut off by a war?

It is plain that cheap quinine and home-raised quinine would be a very desirable thing. The attempt to cultivate cinchona, however, is quite out of the question, and the possibility of producing quinine in the United States has until lately seemed very slight.

Within a few years large quantities of what is known as the cuprea barks have been introduced into London and this country. They contain from one to two per cent. of quinine and a characteristic alkaloid called cinchonamine. They are quite free from the inferior alkaloids. These barks are obtained from small trees or shrubs belonging to the genus *Remijia*. They grow in two distinct regions, one the basin of the Magdalena River, in the province of Santander, Brazil, the other in the basin of the Orinoco, among the mountains which constitute the eastern branch of the cordilleras of the Andes. They grow in a dry climate and at only a slight elevation above the sea. There is, therefore, a prospect that we may be able to acclimate them in certain portions of the United States, such for example as Southern California or some of the Gulf States. They are said to be rapidly disappearing.

It is very well known that, so far, the attempts of our Government, as represented by the Agricultural Department, to acclimatize foreign plants, have failed, or nearly so. Still, this proceeds, we believe, more from political peculiarities than from any climatic faults. If the statements made regarding the *Remijia* are correct, there is no reason to doubt that it can be grown upon our soil. Certainly the country needs quinine, and a great deal of it. We do not feel any serious alarm over possible wars or anti-periodic blockades, but any measure which will cheapen quinine deserves the strongest encouragement. We would second the suggestion that Congress, or the Agricultural Department, undertake the experiment of raising cuprea bark.

EXPERIMENTING UPON THE ARABS.

The project of utilizing the Arabs for purposes of experimentation has been advocated by M. Bouley before the Académie de Médicine. Some weeks ago M. Peuch announced that by diluting the secretions of the tag sore (claveau) in sheep, and then injecting a small amount subcutaneously into healthy animals, he could give them immunity. Furthermore, this immunity was obtained without producing any actual symptoms of the disease inoculated. The experiment was tried upon seventeen sheep, with success in every case. It was affirmed on the basis of these experiments, and of similar experience with inoculations for bovine pleuro-pneumonia and charbon, that immunity against a contagious disease may be obtained by suitable inoculations, *without the production of any of the ordinary symptoms of the disease.*

Reasoning from this alleged fact, M. Bouley conceives that he can perhaps improve upon the now somewhat old-fashioned practices of Jenner. It is possible, he thinks, to take the virus of small-pox, dilute it and inject it subcutaneously, with the result of giving immunity against variola, without there being any constitutional or cutaneous disturbance whatever. But it would be necessary to make some experiments upon human beings first. M. Bouley, therefore, like Mr. Gladstone, turns his longing gaze toward Africa. The Arabs have, as a rule, been obstinately opposed to vaccination. They recoil from allowing the impure blood of the Giaour to be mingled with the sacred juices of the faithful; consequently there has been a great deal of small-pox among the various Arab tribes. Although this prejudice has disappeared to some extent, there yet remain many who will not submit to vaccination. To accommodate the religious idiosyncrasies of this class, M. Bouley proposes to experiment with dilute inoculations. M. Bouley's project is interesting and deserved a kinder reception than it got at the Académie, since it was not proposed to experiment upon the ignorant or the unwilling. It will no doubt be attempted in course of time. Meanwhile it is apparent that the crying need of pathological science to-day, is a class of martyrs who will submit to scientific experimentation.

KENTUCKY INSANE ASYLUMS.

Much discussion has been going on in the Louisville press, lay and medical, over certain troubles in the Central Insane Asylum at Anchorage, Ky. It appears that this model institution has been retaining as lunatics two persons now alleged to be perfectly insane. The Grand Jury has also indicted one of the attendants for wilful murder, by "ducking" a patient, and the charge of gross malfeasance in office has been brought against the superintendent.

Investigations have shown that the institution in question has been conducted very much as though it were a prison instead of hospital. Some six hundred lunatics and epileptics are kept in promiscuous thraldom within its mismanaged limits. The charge of caring for all these has been intrusted to only two physicians. The whole institution appears to have been organized and conducted largely on the

prison-house methods, at which Pinel revolted ninety years ago. Surely, the world moves slowly in some parts of Kentucky.

There is much evidence, however, that the medical men are not all to blame. Judging from the comments of our Louisville contemporaries, politics is very largely at the bottom. From the testimony given it is clear that the State itself makes very inadequate provision for the care of her insane, and also that what she does is done very badly. Two years ago one of the asylums reported itself as having too much money, and as in a condition generally of smiling surplus and peace. At the same time the Anchorage Asylum was hampered with insufficient funds and overcrowded wards. It had, says the report, a beautiful milk-house, and a new and improved coffee apparatus, but a mortality of nine per cent., and a ratio of cures one-third less than the average in asylums. A year ago the State Society called attention to the bad condition of insane asylum affairs, and it is somewhat strange that, with a medical governor, nothing was done. The investigations and agitation now going on come none too early. It is greatly to be hoped that our Kentucky brethren, who do things well when they really set at work, will not leave the present matter until some very radical improvements are made.

VACCINATION OF IMMIGRANTS.

According to a report of the National Board of Health, there were inspected in the States of Indiana, Illinois, and Missouri during the month of September, 1882, 14,404 immigrants, of which number 2,918 were found imperfectly, or not at all protected against small-pox, hence liable to contract and propagate the disease. Of these 234 had *never* been vaccinated, and many of them were adults. On September 6th Inspector Starkweather notes the following case: Found a case of modified small-pox in the person of a single woman, thirty-nine years of age, coming from a small town near Manchester, and bound for Neenah, Wis. She had been vaccinated only once, and then in infancy. She presented a card stating that she had been vaccinated on the steamship Scythia (Cunard Line), duly signed by the surgeon of said ship.

On the other side was printed the following in English and four other languages: "Keep this card to avoid detention at quarantine and on railroads in the United States." In this instance sixty-five adults were vaccinated who had been exposed on the train. There were three cases of small-pox in Ford County, Ill., referred to in the last report, due to the importation of immigrants. One of these cases terminated fatally. Appended to the report is a long list of vessels which have brought to this country a large number of unprotected immigrants, susceptible to small-pox. To divert this danger, a protective measure—that of vaccinating just before leaving port, or during the passage to America, has been adopted. While the plan is a good one, its prosecution has been attended with gross carelessness in many instances, as shown by the last report. It is found that passengers arriving by vessels of the same line are not equally well protected. One surgeon will have made a careful inspection and have vaccinated and re-vaccinated all unprotected or doubtful cases, while another will have been so indifferent to subsequent results, as to have given "Cards of Protection" to those who were either very superficially inspected and not vaccinated at all, or vaccinated with unreliable virus. Now, if the Steamship Medical Service is to be of any real value in preventing the generation and multiplication of cases of variola in our Western States, it must exercise greater vigilance in the discharge of its duties than it at present manifests. To remedy the evil it would be well to vaccinate *just before*, or immediately after sailing, in order that the surgeon may have time to test the quality of the virus, and the value of the operation, and thus be able to report intelligently and truthfully the condition of each immigrant. It also appears that the inspection service of vessels arriving at Boston is superior to that of the New York lines, the former representing a very desirable standard, for there has been in Illinois but one case (a mild varioloid) attributed to Boston in something over one year. In the three States already referred to, as well as in Chicago and St. Louis, the Immigrant Service is to be commended for the efficient work it has done in providing facilities for the care of those affected with small-pox, and for instituting a rigid inspection, and enforcing a careful vaccination in *each* case requiring attention or operative interference.

THE GROWTH OF CHILDREN.

Some interesting facts in relation to the growth of children are furnished by Geo. W. Peckham in the "Sixth Annual Report of the State Board of Health of Wisconsin." It considers first the laws of growth, recognizing the physiological truth that the size of an organism is modified by waste and repair, and that in proportion as reintegration exceeds waste does the body increase in size up to a certain period. Besides these two general laws, there are external forces which determine the rapidity of reintegration and disintegration, and it is found that these various influences do not act with the same degree of intensity at all periods of growth, or affect equally both sexes. In youth, if the conditions be normal, the process of waste is exceeded by that of reintegration, hence the organism increases in size. If, per contra, the hygienic conditions be unfavorable to normal growth, the body must be sub-normal in bulk. Starting with these as facts, statistics are given to show the results of investigations. They are:

First.—The rate of growth in the two sexes is such that the boys are taller until the twelfth year, and heavier until the thirteenth; between thirteen and fifteen the girls are taller and heavier; after the age of fifteen the boys excel the girls both in weight and stature. Girls nearly cease to grow when about seventeen years old.

Second.—Children of pure American descent are taller than children of foreign parentage, but they are lighter.

Third.—The height of American-born men is shown to be more modified by the conditions accompanying *density* than by all other influences, race excepted.

Fourth.—The body of the girl is shorter than that of the boy, until the tenth year, thereafter greater, until the sixteenth. From fifteen to eighteen, the bodies of the girls grow two inches, the bodies of boys over four. For the lower extremities, at nine years those of the girls are longer, at eleven shorter, and from twelve to fourteen longer. At fourteen the lower extremities of girls almost cease growing, while those of the boys increase by four inches between fourteen and nineteen. In this connection we naturally think of the question, Is development of the brain commensurate with this physical growth of the body, and are the same general principles involved in each instance? Let us recall what development is, and what are the conditions most favorable to such a process of natural evolution. By development we mean a process by which an organ is formed, or by which one already formed is fitted for higher and higher functions, till finally it shall exist in a state of perfection. To this end there must be just enough stimulus applied to maintain the organ in a state of normal activity in its co-operative development with other important organs. When such an equilibrium is interfered with by a stimulus which induces excessive vital action, there must follow a hyper-normal disintegration, resulting finally in permanent impairment of function. During this time there may be a sufficient expansion of the mind to meet the unreasonable demands made upon it, but the high tension must eventually produce a general lowering of the vital forces, because of affecting primarily the organ upon whose integrity the entire organism depends for its highest expression of well-being. Such a condition is the product in many instances of our present public school method of instruction.

THE NATIONAL MUSEUM OF HYGIENE.

SEVERAL years ago, when the Parkes Museum of Hygiene was first opened in London, we advocated editorially the establishment of a similar institution in this country. The subject fell dead at the time. Within the past year, however, much interest has been shown in the matter, and such a museum has been organized under the efficient care of the energetic Surgeon-General of the Navy. Congress, during its last session, gave $7,500 to help the institution. At the recent meeting of the American Public Health Association the subject was brought up by Dr. Gihon, and it was suggested that a permanent committee be appointed to forward the success of the museum. The Association gave the plan a hearty endorsement and will make the museum the depository of its own collections. A library is to be connected with the exhibition, and this will materially add to its value. Altogether there is a promise that, before many years, our country will possess a permanent sanitary exhibition which will be of great practical interest as well as creditable to us as a nation.

Reports of Societies.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, October 10, 1882.

DR. T. M. MARKOE, PRESIDENT, IN THE CHAIR.

DR. W. T. BULL read a paper (*vide* p. 451) on

HEATON'S OPERATION FOR THE RADICAL CURE OF HERNIA.

DR. R. F. WEIR presented a record of forty-one cases in which he had operated, with fourteen cures. The record was more or less imperfect, because of the great difficulty in keeping track of the patients, most of whom were treated in a hospital. The dates of cures varied from four and a half months to over two years; the majority were under one year. The cases were divided chronologically into two series. The first contained twenty-eight cases, of which eight were successful, and the others were marked improved. In the list all the so-called improved cases were classed as failures. He did not place much reliance upon the results obtained in the first twenty-eight cases, because it required some time to properly carry out the technique of the operation, which he had found not an easy one to perform. It was not an easy matter to throw the fluid deep into the canal. The timidity which he experienced in his earlier cases in placing the instruments sufficiently near the internal ring, in using Davenport's needle, he had overcome to a certain extent by the employment of DeGarmo's modification of Heaton's needle. With this instrument, with the needle considerably enlarged and strengthened, and the syringe itself slightly changed, he had been able to reach the deeper portion of the canal and discharge the fluid without as much risk as seemed to attend the use of the other instrument; therefore, he considered more reliable the second series of cases, thirteen in number, in which he had obtained six cures, and in two the condition was so improved that the patient was able to wear a truss, which was impossible previous to the operation. In five cases the operation failed completely. In two of these cases the openings were very large, and the operation was purely experimental, hoping only thereby to reduce the size of the opening so that the patient could wear a truss. Four of the successes,

however, were of too short duration to be fairly used in deductions. The fluid first used was Heaton's, but that employed in the last series was Warren's. In all the cases the hernia was inguinal. His failures he attributed, first, to timidity through lack of experience in introducing the point of the needle deep into the canal; and second, from regurgitation of the fluid along the track of the needle as it was withdrawn. He had found that unless he could get a perceptible impulse of the needle through the deep layer of fascia, a hardened cord which resulted from the injection distinctly followed toward the skin. When this occurred failure frequently took place. He did not at present feel so much encouraged with regard to the beneficial results that might be expected as he did in his earlier operations. He could hardly estimate the good results as high as Gay and others, but thought sufficiently well of the operation to urge its continuance on the members of the Society. Little or no risk was encountered, and he believed that the recent experience of Schwalbe in injecting alcohol frequently (the fluid preferred by him) contained a hint for surgeons to follow in practising Heaton's method. He should himself hereafter resort in difficult cases to repeated injections, instead of the two or three advised.

Dr. L. A. Stimson had operated upon one patient in 1879. The hernia was a large inguinal one, and the external orifice admitted two fingers. Three injections were made. The first two produced no reaction whatever. The operations were performed with Heaton's syringe and solution. The third injection was followed by inflammatory reaction which lasted twenty-four hours, and was attended with considerable local induration. The patient was kept in bed about three weeks longer for other reasons, but within a month following the last injection the hernia came down while he was still in bed, although not so large as before the operation. During the interval between the third injection and the descent of the hernia there was a large mass in the inguinal region which steadily diminished in size. The patient did not wear a truss after the injection. Dr. Stimson regarded the case as a failure.

Dr. James L. Little had performed the operation four times. The first case was that of a child, and the operation was a failure, owing to the fact that the point of the needle did not enter the external ring, and the fluid was thrown into the tissues outside.

In the second case the injection caused a deposit which plugged up the ring. Two weeks after the operation the hernia did not come down, the patient left the hospital and has not been heard of since.

In the third case the patient entered the hospital with a large scrotal hernia in a strangulated condition. This was reduced by prolonged taxis under the influence of an anæsthetic. In this case the external ring was very large, so that the scrotum could be invaginated by the finger some distance into the canal. Ten days after, Heaton's operation was performed, and, as in the first case, the needle failed to enter the ring, and the induration took place in the tissues outside, producing no effect upon the hernia. A second operation was performed about a week after, and was more successful; the fluid was evidently thrown into the hernial sac, the induration extending down to a point just above the testicle and upward into the canal. Five months afterward there had been no return of the hernia, the hardened mass had nearly disappeared, and no opening could be felt in the ring by invaginating the scrotum. The patient has discarded the truss.

The fourth case also entered the hospital in a strangulated condition; was reduced by taxis. This was a very large scrotal hernia, and the external ring was of considerable size. Although the utmost care was exercised the injection was thrown directly into the sac, which became filled with deposit and extended down to some distance below the testicle, and the hard induration was also prolonged upward into the canal. This patient four weeks after the operation was going about without a truss, and the induration was slowly disappearing.

He agreed with Dr. Weir as to the difficulty of introducing the needle so as to throw the injection into the situation advised by Dr. Heaton. These two cases, however, showed that there was very little danger if the injection was thrown directly into the peritoneal sac. In both of these cases there was a slight rise of temperature after the operation, and some local tenderness in the vicinity of the external ring. In all these cases he used Heaton's fluid and Heaton's syringe, except one, when he introduced the hypodermic with the greatest care. He believed the operation to be a safe one, and worthy of further trial. He knew of one case in which Heaton operated some years ago, which has remained cured ever since. He agreed with Dr. Weir in regard to introducing the point of the needle so as to throw the fluid into the proper place and produce tendinous irritation.

Dr. H. B. Sands inquired concerning the *rationale* of cure in cases in which it took place, and as to what was meant by tendinous irritation.

Dr. Bull said it had been claimed that white-oak bark caused contraction of the fibrous tissue and therefore it was deposited in the neighborhood of the fibrous tissue, which undoubtedly existed in the walls of the inguinal canal. That was the pathology which had been given by Dr. Heaton, which Dr. Warren had asserted was the invention of Dr. Davenport, of Boston.

Dr. Sands asked if it was supposed that the cure was brought about by the deposit of plastic lymph.

Dr. Bull replied that he was unable to see how that question could be settled without pathological demonstration. There was a plug of exudation in the inguinal canal after the injection, and it was greater in area than the material injected. It was fair to assume, therefore, that there had been a certain amount of plastic exudation produced. Whether there had been an actual contraction of the rings, he thought it impossible to say. But he thought all who had examined these cases would agree that at a later date the size of the ring, as evidenced by the introduction of the finger, was unquestionably smaller than it was before the operation. In some instances it seemed to be absolutely closed. Whether this result was due to a tonic contraction of the fibrous tissue which lasted indefinitely, or whether it was brought about by a process of inflammation, he was unable to say. In the method proposed by Schwalbe there seemed to be a certain amount of pathological reason, because it was well known that repeated injections of alcohol into fibrous tissue would cause a cirrhosis of that structure. There was a certain amount of alcohol in Heaton's fluid, and perhaps this was sufficient to produce a plastic deposit which has a tendency to contract afterward.

Dr. Weir thought there was an inflammatory deposit which plugged up the canal more or less. He

also regarded the suggestion of repeated injections made by Schwalbe an important one.

Dr. Stimson thought that in old cases of hernia the operation could certainly do no good, and believed that whatever of success had been obtained, had been in those cases in which there was a distinct inguinal canal and the hernia was small.

Dr. Bull remarked that in all his successful cases there was no extensive protrusion, and that there was a distinct canal with two distinct openings.

Dr. Stimson thought that the inflammatory deposit made about the canal would render the descent of the hernia more difficult than before the operation.

Dr. Little thought that the dressing had something to do with the result. When a compress and bandage were applied and considerable pressure made upon the walls of the canal, plastic exudation was thrown out and organization probably took place, and in that manner the canal was closed.

Dr. Briddon's experience had been limited to three cases, all of which resulted in failures. He thought there could not be any contraction of the tendinous structure produced by the fluid. He believed that the diminution in the size of the ring could be explained by the cessation of the dilatation, the result of the constant presence of the hernia.

Dr. V. P. Gibney, on invitation, said his experience consisted simply in observing the progress of the cases operated upon by Dr. Bull and Dr. Weir, and to him it had been rather satisfactory. Any one who had had experience in applying trusses to dispensary patients, he thought would appreciate the assistance given by Heaton's operation. Several cases which he had observed were practically unmanageable in this respect, either that the hernia itself could not be retained by the use of the truss, or else that the patients themselves were of that class which is unmanageable. But after one or two injections these patients had been able to wear the truss with a small pad and a light amount of pressure, and in that way they had been made comfortable. His impression was that the results which had been obtained had been permanent, although he had failed in many cases to ascertain what the final results were. As to the number of positive cures he had no experience to relate. He thought the operation was one which should be performed, even if a cure was not effected.

Dr. L. S. Pilcher said that his knowledge of the operation came through one of his acquaintances, who was operated upon for inguinal hernia by Dr. Heaton between fifteen and twenty years ago. The exact character and extent of the hernia he was unable to give. The result was complete relief, which had been permanent. He had been able to persuade but one of his patients to submit to the operation. A young man, seventeen years of age, who had an inguinal hernia, slight in extent, but which had been present for at least five years, submitted to the operation. He was still using a retaining truss, but there had been no reappearance of the protrusion. Of course, it could not yet be stated what the ultimate result would be. In the course of the observation of that case one or two points presented themselves which he thought were worthy of mention. The first was with reference to the character of the instrument to be used. In Dr. Warren's writings, considerable stress had been laid upon the possibility of penetrating blood-vessels with the sharp edges of the needle. The instruments spoken of were such as were intended to be thrust through the skin, and for that purpose necessarily should be considerably sharp. Then they were pushed forward through the connective tissue of the inguinal canal, and finally reached the point at which the fluid was to be deposited. It was, therefore, not to be wondered at that when pushing a sharp instrument along, one should be somewhat fearful lest the manipulations did damage, for he could readily conceive that an artery might be penetrated, or the instrument might be made to pass into the peritoneal cavity. This difficulty presented itself to him in his own case, and he had his needles blunted to such an extent that it was necessary first to make a small opening in the integument and then he was able to pass his blunt-pointed needle along through the tissues without fear of its penetrating the vessels or passing into the peritoneal cavity. Perhaps this precaution would avoid the accident of going outside of the canal. The second point was with reference to the amount of irritation. Dr. Heaton, in his writings, had cautioned particularly against the production of undue irritation, and claimed that if much irritation followed the operation, so much that there was a distinct inflammatory reaction, damage was done, and a successful result was not to be expected. Dr. Warren, on the other hand, had said that it was necessary to have considerable inflammatory reaction, and that unless such reaction was obtained, no benefit would result from the operation. His fluid for injection, therefore, was more irritating than that recommended by Dr. Heaton. Dr. Pilcher asked for the general experience of the members upon that particular point: Which was produced in those cases where the best results were obtained, a marked or only a slight degree of inflammatory reaction?

Dr. Briddon said that a practitioner with whom he had a conversation two or three years ago, told him that he had been present at quite a number of operations performed by Dr. Heaton, and that uniformly the results had been remarkably good.

Dr. Bull said that in only one instance had he succeeded in provoking an excessive amount of irritation, and by that he meant such a degree of inflammatory reaction as manifested itself by swelling, redness, and great tenderness over the point where the injection had been made. He should say, in general, that the cases did best in which a moderate degree of reaction had been excited. He felt inclined to strictly follow the directions given by Dr. Heaton, and to make a second injection in case there was not sufficient local reaction produced by the first, that is, sufficient to give rise to moderate tenderness. He had repeated the injection on that principle in two out of five cases, in which the operation was successful.

Dr. Weir believed that he had made a mistake in not repeating the injection. In one of his cases, in which there was more than the usual reaction, the result was very good.

The President said he had had only a limited experience in this operation. He had performed it some eight or ten times, and his thoughts were early directed toward the danger accompanying the passage of the instrument and the risk of wounding important parts by the sharp point. This was particularly impressed upon him in his first case, which was one of femoral hernia occurring in a lady who was rather fat. He did not dare to use a sharp instrument by plunging it into the groin, lest he might wound the femoral vein, and had made for

himself an instrument considerably longer and stouter than either of the needles which had been exhibited. It was made of steel, with an olive-shaped point, having a central opening through which to inject the fluid. This instrument he used by introducing it first through a little puncture made with the bistoury. He operated twice upon the patient with great ease and satisfaction, as far as the operative procedure went. He had used the same instrument in cases of inguinal hernia, and thought he should not use any other, because it was stronger and could be readily manipulated, and could be freely passed in all directions without danger of doing damage.

Another suggestion was one founded upon his idea of the rationale of the treatment. He believed that the entire success of the method depended upon the formation of new tissue as a result of the lesion caused by the instrument and by the deposit of an irritating fluid in the wounded parts. If that was the case, then it was desirable that the quantity of effusion should reach a certain amount, and that the quantity thus poured out should remain in the situation for a certain time, where it could organize and subsequently contract. Reasoning from these data, it had seemed to him that pressure applied over the part would have the effect of causing absorption of the new material, and would do away with the very result we wished to accomplish. Commonly the hernia could be prevented from descending by the position of the patient in bed. In most of his cases, therefore, he had left the fibrinous effusion to be organized in the inguinal canal without interference, by pressure, keeping the patient in bed, if possible, two or three weeks. He was unable to state the exact results, as all but one of his patients were hospital patients, and they soon disappeared from under observation. The plastic exudation in none of them extended into the scrotum to any extent. There was nothing more than a finger-like process extending down toward the external ring.

TRAUMATIC PHRENIC HERNIA.

Dr. A. C. Post narrated a case as follows: A female patient, nineteen years of age, fell out of a third story window and received a very complicated injury. There were fracture of the lower jaw, fracture of the left humerus, bleeding from the mouth and nose, and severe shock. These were followed by passage of bloody urine and severe abdominal pains, by very urgent dyspnœa, extreme orthopnœa, with tympanitic resonance on the left side of the chest, and the patient died on the fourth day after the injury. There was found at the autopsy a small opening in the diaphragm, on the left side toward its posterior part, through which a portion of the stomach, a portion of the splenic flexure of the colon, and nineteen feet of the small intestine had passed into the left pleural cavity. Probably the passage had been gradual. The urgent symptoms, except shock, were not observed in the beginning. The left lung was pressed toward the upper and posterior part of the thorax, and weighed only eight ounces. The right lung was hyperæmic and œdematous, and weighed nineteen ounces. Dr. Post regarded it as a remarkable instance of traumatic phrenic hernia.

EXCESSIVE REACTION IN A HYDROCELE TREATED BY INJECTION OF GLYCERINE AND CARBOLIC ACID.

Dr. Post also narrated a case as follows: Four weeks ago a man about fifty years of age called upon him with a large swelling of the scrotum, larger than a single fist, in which there was fluctuation. There was no distinct translucency. It was a case of hydrocele of twenty years' standing. He punctured it with the trocar, drew off a quantity of clear fluid, and then injected the sac with about three drachms of a fluid consisting of equal parts of glycerine and carbolic acid. On the following day the patient came to his office and there was about the usual amount of inflammatory reaction, and the progress of the case seemed to be favorable. On the next day the patient was not well enough to go out, and when Dr. Post visited him he found an enormous distention of the envelopes of the testicle. There was a livid discoloration, and the swelling was painful and heavy. He felt somewhat alarmed about the condition of the patient, but the swelling gradually subsided and now the man was able to go about, wearing a suspensory bandage. There was a greater amount of reaction than he had ever seen in a case of hydrocele treated by injection. In answer to a question Dr. Post said it had been his custom to allow patients to walk home after being thus treated for hydrocele, and with the directions that they should lie down and remain in a recumbent position for a few hours; if then there was no pain or tenderness, that they might get up and walk about, and perhaps apply friction to the part. If there was much tenderness and pain he gave directions that the patient retain the recumbent posture. He had not seen excessive reaction follow the injection of tincture of iodine.

SCIATICA AND CRURAL NEURALGIA.

Dr. Post also reported a case of sciatica of six years' standing. The patient had received the ordinary variety of treatment without benefit, and he came for the purpose of having the sciatic nerve stretched. Dr. Post bandaged a splint to the posterior part of the limb and then flexed the entire limb upon the trunk, but was not satisfied that he stretched the nerve. At least the patient was not benefited by the procedure. About four weeks ago he exposed the nerve by an incision and applied traction in both directions, graduating the force by means of a spring balance. This he did at the suggestion of Dr. McBride. The force applied was forty pounds, and applied very gradually in both directions, first to the proximal end downward, and then to the distal end upward. The patient during most of the time since the operation had remained in bed, although for the last two weeks he had been allowed to take some exercise. There had been no return of the sciatic pain in the upper part of the limb, but there had been a certain amount of paralysis, both motor and sensory, in the lower part of the foot and leg, and traumatic pains in that region. The partial paralysis was gradually disappearing, although a considerable amount remained. It was too early yet to determine what the ultimate result would be.

Dr. Post also referred to a case of anterior crural neuralgia of three years' standing, in a patient of about fifty years of age, in which he advised the application of the actual cautery. It was applied along the course of the nerve from the groin nearly to the knee, and also upon the leg at a few points where it was painful. Thorp's multiple cautery, having six points, was used, and it was applied at eighteen different places, making in all one hundred and eight minute punctures. He saw the patient eight days after the operation and the relief had been complete.

VESICAL CALCULUS—RAPID LITHOTRITY.

Dr. L. A. Stimson presented a stone removed by the rapid operation from the bladder of a man sixty-two years of age. There was nothing specially noteworthy in the clinical history of the case. The stone was composed of urates, weighed 562.5 grains, and measured at the first catch four centimetres. The lithotrite used was one which Dr. Keyes had devised. The beak of the instrument was almost square, the tip being curved as suggested by Dr. Bigelow. The female blade was largely fenestrated, the male blade deeply notched, and it went entirely through the fenestra of the female blade. The catch in the handle was double; the screw was a rapid one, moving one inch in three turns. The evacuating-tube which he used was also devised by Dr. Keyes, was straight, measuring 28 French. It consisted of a straight tube fitted with a staff having a flexible rubber end, an inch and a half long, with a permanent curve like that of an ordinary sound. The flexible rubber end projected beyond the end of the tube, and was intended to facilitate the introduction of the instrument. This evacuating-tube, which was a new device, delivered extremely well, and seemed to overcome the difficulty which had sometimes been experienced, namely, delay caused by fragment of stone becoming lodged in the eye of the instrument. The man was discharged cured on the sixth day.

Dr. Keyes remarked that heretofore he had not been satisfied with any lithotrite except one which had an open beak, as all others were liable to become impacted. There were two additional difficulties occasionally met with in practice—first, the male blade did not catch perfectly well about a smooth stone, and second, it was sometimes difficult to introduce the instrument when the prostatic urethra was rigid. To meet these two difficulties he had devised the instrument exhibited, the male blade of which was really Reliquet's blade, and the female blade was fenestrated and had Bigelow's curve at the beak. With this beak he had been able to pass through a rigid prostate with perfect ease. The straight evacuating-tube he thought was desirable because he had experienced considerable trouble with curved tubes in having pieces of the stone lodge in the eye, necessitating the withdrawal of the instrument, as other fragments could not pass through, and in withdrawing it the urethra was liable to be torn if the fragment projected.

The Society then proceeded to the transaction of miscellaneous business.

Hospital Saturday and Sunday Association.—At a recent meeting of the Hospital Saturday and Sunday Association, important amendments to the constitution were approved by the eleven members of the association present. It was agreed to amend Article II. by substituting an article providing that no hospital with less than twenty beds in its wards shall hereafter be admitted to the association. It is also provided that each hospital shall be entitled to an additional vote for every fifty free beds in its wards. These amendments are inoperative without the written assent of eight more of the members of the association, nineteen votes constituting a majority. The association is preparing to do a greater work this year than ever before, and it is believed that the Hospital Saturday and Sunday subscriptions will be largely augmented this season.

Correspondence.

GYNECOLOGISTS AND VIRGINS.

To my Friend Andrew.

Some time last week I found in the post-office your postal, the book-lists I had asked for, and a pamphlet in dull green covers. The upper right-corner of the pasture-lot was fenced off, and therein I learned that you youself were the parent of the enclosed idea (for, as I have noticed, such literature consists of one idea, more or less new, diluted with old stock, as Marion Harland directs to make new soup by adding some savory article to what was left over from yesterday).

The extreme modesty of the title, thus shrinking up into one corner of the cover, befitted well the pages within, where each little island of verdant text seemed to lose itself moderately in an ocean of margin.

In fact, it was your monograph "On a New Method of Removing the Cervix." Though why this general rage against the cervix, by which every one has a new way of cutting, sewing, or basting the humble part?

However, I congratulate you upon this your first public appearance.

So you are a specialist, a gynecologist! You've seen a flock of sheep circle around, a confused mass of doubt, until one starts to jump the fence, and then the whole flock with marvellous decision of character, so out of keeping with their hesitation of a moment ago, follow. Where? Oh anywhere, anywhere where they all go.

Come now, don't you think the boasted division of labor which, our philosophers tell us, is both a means and a result of our high state of civilization, has in it, at least as it develops itself in the formation of medical specialties, a good deal of that impulse common to gregarious animals?

Why have you so suddenly come out as a specialist? Why, because they all do it; and, old chum, between us, I'll tell you another reason. You think you see your way to have patients sent to you by other doctors, to whom be sure you will from time to time send "the compliments of the author." But be very careful you don't send 'em any of your patients. Well, yes; you might send them some incurables or "malades imaginaires," *to get their opinion*. But the good ones, the paying ones—"Oh there are some of my old families who will insist on having me." That covers them, you see.

You say you have made a special study of it. Oh, of course.

So you are a gynecologist!

Andrew, your daughter is a fine girl. She has the beauty of face and mind and character that careful nurture and training can give her. I doubt not you have trained her to be self-reliant and the defender of her own honor by the force of her own will.

But who are going to be your patients? Have you foreseen the mothers who will bring their daughters to you, the young girls who will come to you?

Factories, sewing-machines, long hours' standing behind counters, hanging out clothes barefoot, hard toil, scant wages, and many sorrows—these are the causes that send them to you; and they all come to you because of some derangement of the generative

organs. And what are you going to do to them? You are a specialist, but before all you are a physician; and let me warn you never to forget it. Not only do they come to you for treatment, but they trust you, and before you make that vaginal examination which you look upon as a necessary preliminary to making your diagnosis, stop and imagine the shock which your own daughter would experience were she to be obliged to submit to it.

"Oh," you say, "but she is of a refined nature." Andrew, the instinct of modesty is not confined to the cultured; such have a double guard in instinctive modesty and a trained will, but the only safeguard of the uneducated is that instinctive feeling which always exists once.

Want, poverty, hardship, often a pretty face or form, and all manner of temptation drive the daughter of the poor toward ruin, and instinctive modesty is the one sole safeguard. Do you think you can venture to first shock, and then, by repeated vaginal examinations, obliterate this instinct with impunity?

But, you say, it is necessary for the recovery of the patient. Are you sure?

In the first place, let me ask you, do you need to see a patient's liver, intestines, stomach, or kidneys in order to form your diagnosis when one or other is ailing?

Do you not rather pride yourself that from the patient's complaints and the altered secretions you can form your diagnosis? Neither do you demand to *feel* of a patient's other internal organs. Certainly palpation aids in a diagnosis where there exists some marked malformation of the *anterior* abdominal organs, but can you by palpation find out a dyspepsia, an enteric, gastric, or cystic catarrh, or a nephritis? Yet these are easily diagnosed.

And when you have looked into the vagina, what do you see? practically little in most cases, never farther than the outermost opening of the uterus.

Has it not often struck you that you find, usually, just what the symptoms led you to expect to find?

But, you reply, you expect the probe to give you valuable information. Were all virgins truly virgins, I could only assent; but how many gynecologists of experience can stand forward and say, "I have never accidentally caused an abortion"?

You say you are obliged to make local applications to the diseased parts. Do you make local applications to a liver, spleen, or kidney, in which is some subacute inflammation? Are not a bronchitis, enteritis, or cystitis cured without the direct application of solid nitrate of silver or iodine? No, no, Andrew, the same blood-vessels and lymphatics supply the uterus or ovaries as supply all the organs. The same blood impoverished or deteriorated flows through them all, and in one or another brings on disease, or the same blood enriched and purified is capable of restoring to healthful function the one as the other. The same sensitive and sympathetic nerves are similarly affected. The same use of judgment in the estimation of symptoms will bring you to an honest diagnosis in uterine diseases, just as certainly as in diseases of organs which lie out of sight and touch, and the same principles of treatment will affect the blood-supply, the nutrition, the innervation of the generative as all other organs.

Far be it from me to imply that there are no cases in which a vaginal examination is not imperative and direct local treatment essential. Indeed, such cases are frequent, although by far less common among virgins than among married women, and he would be guilty of criminal neglect who should refuse to resort to all known measures of cure. But let the vaginal examination be held in reserve as the last and extreme resort, when the same principles applicable to all organs have been faithfully tried and found wanting.

Now, Andrew, one thing more before I close. In your zeal to restore damaged perineums, and to sew up or cut down cervices, remember that it sometimes falls to the lot of the plain doctor to effect a cure of the *patient* by restoring the general functional health, even where a specialist has had full swing and failed to cure the *disease*. So, if you will be a specialist, try not to forget what you used to know as a plain doctor.

CLAUDIUS.

CONVALLARIA MAIALIS AGAIN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: As the home supply of this valuable cardiac remedy is likely to be short till another spring gives us the flowering plant in abundance, it might be well to state that Professor Germain Sée writes me that a reliable extract of the convallaria may be obtained from the principal pharmacies in Paris, France (Pharmacie Mialhe, 8 Rue Tavart; Pharmacie Langlebert, 55 Rue des Petits Champs).

The *Working Bulletin* of Parke, Davis & Co., on the convallaria maialis, states that Dr. Ralph D'Ary, of Romeo, Mich., a Russian physician, was the first to introduce the lily of the valley into this country, having learned its therapeutical uses while on a summer tour in his native country. To Dr. D'Ary, certainly, the priority of credit is due. I find that it is difficult to substantiate my former statement (taken from insufficient authority), that certain eclectics in this country had used this remedy for cardiac dropsy prior to its introduction by Dr. D'Ary.

E. P. HURD, M.D.

NEWBURYPORT, MASS.

ERYSIPELAS AS A CAUSE OF PUERPERAL PERITONITIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The *American Journal of Medical Sciences*, for October, contains a review on the "Transactions of the American Gynecological Society," vol. vi., for the year 1881.

In this review, an essay by Dr. H. F. Campbell, of Augusta, Ga., on "Erysipelas in Childbed without Puerperal Peritonitis" is cited. In his essay Dr. Campbell reports the case of a woman delivered while suffering from facial erysipelas, and who escaped "all puerperal complications due to erysipelas." "Dr. Campbell did not touch the woman, and the midwife made no manual contact."

In the discussion which followed, Drs. Goodell and Smith, of Phiadelphia, related two cases of erysipelas in puerperal women without any affection of "the internal organs." Dr. Smith concluding from these cases that "puerperal fever is essentially contagious and not infectious."

Dr. Ellwood Wilson believed in the power of disinfectants to destroy the poisonous influence of erysipelas or scarlatina over puerperal patients, he having attended such cases the same day with but one unhappy result.

Dr. Barker believed, with Dr. Putnam-Jacobi, that the poison of cutaneous erysipelas is often not transmitted to the internal organs. He believes in the

great danger of contagion to puerperal women from erysipelas with purulent discharge.

Soon after the appearance of this review, I had a patient under my care in the Post hospital with phlegmonous erysipelas of the right arm, extending to the chest, and of the right leg. From the history of the case, and from my experience, while interne in the Charity Hospital, I have no doubt of the correctness of the diagnosis. There was deep suppuration and wide-spread destruction of the connective tissue in both situations. Pus, which was abundant and ichorous, appeared some days earlier in the axillary region than in the leg. I incised the former about 7 o'clock P.M. Afterward I simply cleansed my hands with tepid water and common washing soap.

About twelve o'clock the same night I was aroused by a soldier to see his wife who "was sick." Not knowing the nature of the sickness, and flurried by this unusual occurrence, I hastened round to his tent, only to find her in labor. Without thinking I immediately made a vaginal examination, found the membranes ruptured, the head presenting high up in the pelvis, and the os scarcely sufficiently dilated to admit my index finger. Returning to my quarters I, for the first time, bethought of my erysipelatous patient, and was naturally very much alarmed and annoyed by my thoughtlessness.

There then being no other doctor on duty at the post, I determined to change my clothing, thoroughly disinfect myself with carbolic acid, and attend to the confinement, leaving my other patient for a couple of days in charge of the hospital steward.

The patient being a primipara, the labor was, as I had anticipated, a very tedious one. Toward the final stage the patient became so irritable and exhausted that I deemed it prudent to deliver the head by instruments. The perineum was slightly ruptured, the placenta delivered, and the uterus forced to contract by Crede's method with but slight hemorrhage.

Another soldier's wife undertook to nurse the patient. By my directions, to which she adhered religiously, the vagina was syringed with a hot carbolized solution, twice a day. Having to attend to my erysipelatous patient I never went farther than the tent door after her delivery. Yet, under the watchful care of her companion, this patient never had the slightest bad symptom; never any rise of temperature. On the ninth day she was quite clamorous to be allowed to sit up a "little while," and I granted permission. Throughout her convalescence was exceptionally favorable.

By all who discussed Dr. Campbell's paper it was agreed that erysipelas was "essentially contagious and not infectious," and especially dangerous when the erysipelas was phlegmonous and suppurating.

I wish to record this case, first, because my hand was bathed in ichorous pus; second, because no disinfectant was used to cleanse it; third, because I made a thorough examination of the presenting part scarcely five hours afterward; fourth, because from the slight laceration of the perineum, the patient was especially exposed to contagion.

I have no explanation to offer for this very fortunate immunity. I would merely suggest that we have not as yet, perhaps, arrived at a true knowledge of the relation between erysipelas and puerperal peritonitis.

PETER R. EAGAN,
Assistant Surgeon U. S. Army.

FORT BOWIE, ARIZONA, October 23, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 4, 1882.

Week Ending	Typhus Fever	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Oct. 28, 1882.	0	31	20	3	9	42	1	0
Nov. 4, 1882.	0	44	33	3	9	40	0	0

THE RECEPTION TO PROFESSOR SAMUEL D. GROSS, M.D., LL.D., D.C.L. OXON.—Last week Drs. J. Marion Sims and his son Harry Marion Sims gave a reception for the medical profession of this and other cities to Professor Samual D. Gross, of Philadelphia. The whole affair was brilliantly successful, and the honors appear to have been equally divided between the givers and the receiver. No compliment was better merited nor more gracefully tendered than that to the distinguished Philadelphia surgeon. It is hard to imagine a more appropriate expression of respect for a well-earned reputation than was shown by the presence on that occasion of so many men from different parts, who themselves have been active and successful workers in the profession. In fact it would be easier to say who were not there than to name those who were. The large hall in the Hotel Brunswick was tastefully decorated, the supper was bountiful, and the opportunities for the freest interchange of social amenities were thoroughly enjoyed. The guest of the evening was in good health and spirits. It is the common wish that he be blessed with their continuance, and long live to enjoy the fruits of his extensive and successful labors in surgical science.

PROGRESS OF THE YELLOW FEVER.—Reports show a steady decline in the cases of yellow fever at Pensacola, Fla. Only nine or ten new cases occur daily.

THE PAYMENT FOR MEDICAL SERVICES TO THE LATE PRESIDENT GARFIELD.—The Garfield Board of Audit has received the bill of Mrs. S. A. Edson against the estate of the late President Garfield, which had been returned to her because of certain informalities. Her claim is for $10,000 for skilful attendance in her professional capacity as a physician. It will, therefore, have to be considered as coming within the limit of $35,000 allowed to the physicians under act of Congress.

THE GRAND JURY ON THE CITY INSANE ASYLUMS.—The Grand Jury has recently presented the following as the result of its investigations: At the inquest of this Grand Jury upon matters relating to the management of Ward's Island Lunatic Asylum, there has developed strong evidence of the existence of a system so dangerous to the rights of citizens that we feel it our duty to recommend that a change in the laws may be made to remedy the evil and prevent, as far as possible, the incarceration of sane persons in either public or private asylums. To this end we recommend that the alleged lunatic, in all cases, before commitment shall be examined by

three physicians, each acting separately without the presence of the others, and that the examination shall be had before a judge and in the presence of counsel for the accused; that the physicians shall be selected by the judge, in the same manner that jurors are drawn, from the names of all reputable physicians who may have been in active practice in the State, county, or city during a period of five years at least, and that a majority verdict with the concurrence of the Judge shall be necessary to a commitment. The Grand Jury also found that the sanitary arrangements were deficient, and that the opportunities for patients to communicate with their friends were too limited.

The New York Post-graduate Medical School had a very successful inauguration at Chickering Hall November 4th. Dr. Wm. A. Hammond presided and delivered the opening address. He said that the course of study for medical students in our colleges rarely lasts more than three years, and in that time it is simply impossible for a student to gain sufficient knowledge to enable him to practice his profession intelligently and safely for his patients. If the student wishes to excel, and is wealthy, he may go to Europe and there complete his studies, or, in some instances, he may enter a hospital and there gain a practical knowledge of his work; but the great majority are obliged to go out into the world without being well grounded in the principles of their profession. Medical science, too, is progressive, and it is difficult for a practitioner to keep pace with the progress of the science. It is not agreeable for him to attend the lectures to the undergraduates, and even if it were, he would not get what he wants there. It is to provide for the wants of such men, and to give them a higher clinical education than they can secure in our colleges that the Post-Graduate School has been organized. Dr. Hammond was followed by Dr. D. B. St. J. Roosa, Rev. Henry Potter, D.D., Dr. J. Marion Sims, and the Hon. John Bigelow. A large number of prominent medical men were present.

New Method of Preparing Blisters.—Mr. Limousin has devised a new form of blister, with a view of affording to the physician a greater variety of choice in degree and kind of vesication, and also with a view of preserving the ready-made blister in better condition than is usually the case. He spreads a thin layer of ordinary blistering cerate upon strong, thin, unsized paper, and covers it with the same. The vesicating layer is about one and a half millimetre in thickness, and one of its surfaces is camphorated. When using the blister, its outline is marked upon the paper covering it; it is then cut off and applied to the part by means of a piece of adhesive plaster. The covering paper may be readily removed, both from the plain and from the camphorated side, by means of a wet sponge. If the physician orders a blister covered with oil paper, it is only necessary to saturate the covering paper with oil. The same process may be also used for the preparation of other plasters.—*Rép. de Pharm.*

Curious Effect of Lightning Stroke.—Dr. Herbert C. Jones, of Cerro Gordo, Illinois, writes: "Tuesday, August 15th, at 10 A.M., I was called to see Charlie S——, aged eight years, who was suffering from slight shock induced by his proximity to a tree struck by lightning, he being not more than six feet therefrom at the time. The mother stated he had been led home by a playmate, but could not, as she expressed it, 'see across the room, nor put his right heel to the floor.'

"At the time of my visit, an hour later, his vision was somewhat improved, but both pupils were still slightly dilated and irresponsive to light. The boy, usually bright and active, was subdued in manner and indisposed to exertion. The right leg was half-flexed and foot extended, and both stiffened in these positions; the effort to extend the one and flex the other ever so gently being met with complaint of pain in knee and ankle. Upon grasping my hand with his right, he was able to make a fair degree of pressure, but complained of pain in the ball of hand upon doing so. No other muscle or part seemed affected, though there was slight nausea, but no vomiting. All possibility of injury by falling was removed by the fact of his being caught in the arms of a bystander as he staggered forward.

"The symptoms abated toward evening, and next morning he was as well as usual.

"The point of greatest interest in the case was obtained from the boy in the evening, when he became more communicative. As the shock came he had raised his foot to kick at a bee, and the muscles became fixed in that position, and so remained for several hours. What motion was taking place in the thumb at the time is, of course, uncertain.

"Though the accompanying peal of thunder was loud, the electric current must have been partly disseminated, as the bark only was stripped from one side of the tree, that nearest the boy."

The Army Medical Museum and Library.—At the last stated meeting of the Philadelphia County Medical Society, Dr. Wm. M. Welch offered the following preambles and resolution, which were unanimously adopted: *Whereas*, There is reason to fear that at the next session of Congress an effort will be made to destroy the identity of the great Medical Museum and Library at Washington, by merging them into the General Congressional Library, and placing them under the control of the latter; and, *Whereas*, Under their present management this museum and library have grown to be the most valuable collections of their kind in the world, and are consequently of incalculable value to the cause of medical science, thus rendering their preservation and progress objects of deep interest to the medical profession of this country; therefore, *Resolved*, That the Philadelphia County Medical Society earnestly, but respectfully, request the honorable senators and representatives of Congress to make no change in the present management of the Army Medical Museum and Library, but would earnestly urge upon Congress the importance of providing a commodious fire-proof building in Washington for better preservation and protection of these invaluable collections.

Dr. Julius F. Miner, of Buffalo, N. Y., has resigned from the Chair of Operative and Clinical Surgery in the Medical Department of the University of Buffalo.

Ophthalmic Division of Charity Hospital.—In the report of the Ophthalmic Division of Charity Hospital it is shown that the advantages for the successful surgical treatment of diseases of the eye are exceptionally good. The nurses, as a result of the didactic lectures given by the visiting surgeons, pay intelligent attention to details in the care of patients operated upon, thus doing away with many dangers incident to careless nursing. The number of operations and the percentage of cures compare

favorably with those of hospitals devoted to the special treatment of diseases of the eye. The surgeons of the division are Dr. E. S. Peck, Ed. T. Ely, and R. Kalish.

A Specific for Singultus in children is said to be a few grains of granulated sugar moistened with cider vinegar.

The McGill Medical Faculty, the oldest medical college in Canada, recently celebrated its semi-centennial jubilee.

The Appointment of Internes to the insane asylums of France has heretofore been made directly by the Prefet. Candidates will now have to undergo a competitive examination.

An Epidemic of Typhoid Fever in Paris.—One hundred and thirty-four deaths from typhoid fever were reported in Paris for the week ending October 5, 1882. The total number of cases is said to be over two thousand. At Lariboisière alone there were 437 cases. In two days 283 cases were received into the different hospitals. These hospitals have had to discharge or transfer a number of chronic and convalescent cases in order to accommodate the new patients.

Burning of an Asylum.—By the burning of an asylum at Halifax, N. S., last week, thirty-one inmates perished.

The New Canadian Medical School at London, Ontario, has opened with a class of fifteen.

The Toronto General Hospital is having a large and handsome addition built.

Falling by the Way.—Dr. Wm. Pepper once showed in an introductory lecture that in no other calling do so many fall by the way as in the profession of medicine.

A Society for the Protection of the Natural Form of Woman has been organized by a number of young men in Kent, England. The object of the Society is good, and we are glad to learn that there is a wide-spread eagerness to embrace it.

Obesity and its Treatment.—Ebstein, of Wiesbaden, describes a new dietetic method for the relief of obesity. He does not believe in "Bantingism," and states that it produces inanition which may be injurious. Dr. Ebstein contends that a diet of albuminous and fatty matter tends to check deposit of fat, and that it is the sugars and starches which are to be left out in an anti-fat regimen. He gives bread, however, and green vegetables, peas and beans, but no potatoes. The addition of fat to the diet-list has the advantage that it produces satiety sooner and the patient does not eat so much.

New Tests of Albumen in the Urine.—Dr. Wm. Roberts states that a very delicate test for urine is a *saturated* solution of common salt to which is added five per cent. of dilute hydrochloric acid. This gives a white precipitate with albuminous urine, which precipitate is not coagulated albumen, however, but a soluble form of this proteid. Dr. Roberts adds (*Lancet*):

"I have carried about with me for some months past a little pocket case (which is only a stiff-backed cigar case) which I have found a useful and safe clinical companion. It contains a book of litmus papers; a narrow corked phial filled with acidulated brine; a test-tube charged with Cooper's pellets of the solid Fehling's test, guarded with an india-rubber stopper; and, lastly, an empty test-tube, also provided with a cork. This compact arrangement furnishes the means of ascertaining the reaction of the urine, and of testing it in the most delicate manner for albumen and sugar. The empty test-tube also serves to carry home a specimen of the urine for further and more minute examination.

Mr. Guy Neville Stephen, in the same journal, states that the best test for albumen is a double iodide of mercury and potassium, with acetic acid. The urine is first acidulated with the acid, then the double iodide is added. This will give a precipitate when there is only five centigrammes of albumen to a litre of water. The formula for a precipitating solution which also gives quantitative results is as follows:

℞. Potassii iodid..... 3.22 grammes.
Hydrarg. bichlorid ..... 1.35 gramme.
Aquæ destillat...q. s. ad. 100.00 cub. cent.

M. One drop of this, from a pipette giving a drop of five centigrammes, precipitates 0.005 grammes of albumen.

Treatment of the Wounded in Egypt.—The antiseptics used on the wounds were iodoform, and a solution of chloride of zinc, forty grains to the ounce. Sometimes one part of this zinc solution was added to three parts of one in twenty carbolic acid solution, with excellent results.

The Fifth Anniversary of the Washington Training-School for Nurses was held at Washington, D. C., October 24th. Addresses were delivered by Dr. J. M. Toner and Judge MacArthur.

The Oil of Gaultheria now recommended for acute rheumatism is sometimes adulterated with oil of turpentine, birch, and also with alcohol.

A Case of Varioloid in the Vermont Legislature, recently, caused a stampede among the members.

State Medical Society of Virginia.—At the recent successful meeting of this Society, at the Fauquier White Sulphur Springs, Dr. Taylor received a $50 prize for an essay on "Abdominal Surgery," and Dr. Elzey received an equal amount for an Essay on "Alcohol."

The Liqueur Absinthe, of which the use is said to be increasing in France and England, has the following composition: Absolute alcohol, in a hundred parts, 50.00; oil of wormwood, 0.30; other essential oils, 2.52; sugar, 1.50; chlorophyll, traces; water, 45.65.

Small-pox in Paterson, N. J.—The health authorities of Paterson have so far been unable to suppress the small-pox, which has even increased at times despite all efforts. The Health Committee are of opinion that one chief cause of failure lies in the fact that the vaccine virus is not good.

Improvement in the Paris Morgue.—The bodies in the Paris morgue are now frozen and kept in this condition until their final disposition. The freezing apparatus consists of a modification of the Carré method, in which the cold is produced by the evaporation of previously liquefied gaseous ammonia. But instead of water, a solution of calcium chloride, which remains liquid at a temperature of 20° F., is made the direct recipient of the cold thus generated, and is carried in pipes to the top of the building, whence it falls in cascades. The same fluid is again collected and re-exposed to the freezing machine. In this way the temperature of the room is kept well below the freezing-point constantly. When bodies have become putrid or re-

quire to be kept longer than usual, they are placed in a row of cases like a set of pigeon-holes, where, by means of the same apparatus, the temperature is maintained at a much lower point. The bodies which have been kept at 20° F., and which have been for weeks of stony hardness, show very little tendency to putrefaction.

RENDERING THE LARYNX ANÆSTHETIC.—Dr. Brown-Séquard states that although the inhalation of carbonic acid gas, or of chloroform, causes at first irritation, this soon subsides and the larynx becomes almost or entirely anæsthetic. He suggests that by using these agents to reduce sensibility, instruments may be introduced into the larynx without much trouble. The carbonic acid should be given with care.

VIRGIL AS A VETERINARY POET.—The *Journal of Comparative Medicine* endeavors to show that Virgil, as a poet, properly belongs to the veterinarians. He describes in the Georgics a number of diseases that affect cattle. In one place an ox is supposed to have died from anthrax:

> "Ecce autem duro fumans sub vomere taurus
> Concidit, et mixtum spumis vomit ore cruorem
> Extremosque ciet gemitus, it tristis arator," etc.

Which Dryden translates as follows:

> "The bull, which to the yoke was bred to bow
> (Studious of tillage and the crooked plough),
> Falls down and dies; and dying, spews a flood
> Of foamy madness, mixed with clotted blood."

In the same connection Virgil describes most vividly the effects of an epidemic among horses. The clinical symptoms resemble more those of glanders.

THE CAUSES OF UTERINE DISPLACEMENT.—Dr. Graily Hewitt found that among 340 cases of misplacement in single and married women, the trouble could be traced to mechanical causes, such as straining, lifting, falls, etc., in 43 per cent. Long-continued standing, as in shop-girls, may also cause it. Mechanical causes generally need some predisposing weakness on the part of the woman in order to produce their effects.

EGYPTIAN TREATMENT OF SYPHILIS.—In the course of an article on "Medical Notes of Travel in Egypt," by Dr. Josiah Williams, in the *British Medical Journal*, occurs the following: "The native treatment of syphilis in young girls is very primitive and very barbarous. Close to the town (Souakin), in the Red Sea, is a little island, called originally Sana Gin, and from which the town takes its name. The girl is taken across to this island by six women; she is then laid naked on her back; on each arm and each leg sits a woman, another on her chest. The operator, another woman, who is provided with a sharp sea-shell, scrapes away in the vagina until she is satisfied that all diseased parts are removed, and then, utterly regardless of the shrieks of the girl, gets a handful of sand from the sea, and rubs that in. The disease is then supposed to be cured by this rather rough operation."

INOCULATION IN THE TREATMENT OF PANNUS.—The heroic measure of inoculating gonorrhœal pus for the relief of severe pannus has been tried in three cases in the Ophthalmic Division of Charity Hospital, with the following results: First patient, totally blind in both eyes for several years, was inoculated with gonorrhœal pus; discharged in April last, at his own request, as he desired to get work; vision in one eye 10-200, and 2-200 in the other. His sight has undoubtedly doubled since, though every effort to find the party has been unsuccessful. Second patient, right eye with white leukoma (large iridectomy previously made) and partial pannus; vision, 6-100; left eye, 12-100. Third patient: right eye, vision 20-100; left eye, perforated cornea and perception of a moving object at a distance of two feet. Second and third patients had perception of light in one eye, while with the other, each patient could count fingers at the distance of a foot (1-200.) Both were inoculated with a traumatic urethral discharge, which ceased after ten days' treatment. The purulent ophthalmia was very severe in all four eyes and continued for seven weeks, during which time the patients had a special nurse, night and day; and though in open ward, they were successfully secluded from the other patients by means of screens. These results are worthy of consideration, though the procedure is confessedly severe.

FORCED ALIMENTATION AND WASHING IN DYSPEPSIA.—M. Debové's method of treating phthisis by feeding the patients through a tube has been applied to cases of dyspepsia, chronic gastritis, vomiting, and dilated stomach. The stomach is first washed out, and then milk, or bouillon and eggs, or Debové's powdered meat are used. Excellent results are reported, the patients gaining in weight, and losing all their bad symptoms. Debové's powdered meat is claimed to have five times the nutritive power of ordinary raw meat.

OVARIOTOMY.—The per cent. of recoveries among 2,023 cases of ovariotomy, collected by Dr. Younkin, was 73. The lowest ratio of recoveries among modern large operators is Schroeder's, being 62. The highest is Keith's, 86. The highest ratio has been among those who used Lister's methods.

DR. MCINTYRE, and not Dr. Sibbett, should have been credited with the article on the "Per Cent. of College Bred Men in the Medical Profession" read before the American Academy of Medicine, October 27th.

PURGATIVE LINIMENT.—When medicine cannot be administered the following may be used: tincture of colocynth, ʒ j; castor oil, ʒ ij. The tincture of colocynth is to be prepared from stronger alcohol and one-tenth of its weight of colocynth deprived of seeds. A teaspoonful of the liniment is to be rubbed on the abdomen morning and night.—*Drug Circular.*

THE PREVENTION OF IRREGULAR PRACTICE.—Dr. C. R. Agnew writes: "In THE MEDICAL RECORD for November 4th, p. 524, the following sentence occurs in the report of the late proceedings of the American Academy of Medicine: 'Dr. Cornelius R. Agnew said there was some discouragement in his State with regard to laws for the prevention of irregular practice.' I said, or intended to say, the very opposite. I said, or intended by my remarks to affirm, that an excellent work was being done by the Medical Society of the County of New York in enforcing existing laws against quackery, that the defects in existing laws were being discovered, as attempts were made to enforce them, that some pretentious charlatans had been driven out of New York already, and that a spirit was aroused in the profession which would find expression in needed amendments to the laws against irregular practice; that we had every ground for encouragement."

Original Communications.

INTERNAL ŒSOPHAGOTOMY.[1]

THE DIVISION OF MEMBRANOUS OR CICATRICIAL CONSTRICTIONS OR OBSTRUCTIONS IN THE ŒSOPHAGUS BY INTERNAL SECTION.

BY J. O. ROE, M.D.,

ROCHESTER, N. Y.,

FELLOW OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION, MEMBER OF THE AMERICAN MEDICAL ASSOCIATION, OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, OF THE CENTRAL NEW YORK MEDICAL ASSOCIATION, ETC.

(Continued from p. 541.)

CASE VIII. (By Tillaux).[2]—A saddler, forty-eight years of age, was admitted to Hospital St. Louis, under the care of Tillaux, October 15, 1872.

Ten years before, while in Mexico, in mistake for brandy, he took a caustic liquid, the nature of which he did not know. It caused a sensation of heat behind the sternum for a few hours, which he would have forgotten had it not been followed by dysphagia and occasional violent spasms of the œsophagus, when it was impossible for him to swallow anything.

During the following year dysphagia gradually increased, until he was obliged to abandon all solid food, and at the time of admission to the hospital it was with the greatest difficulty that he could swallow liquids in very small quantities; these he would attempt to force down by making pressure downward along the neck. He was now very weak and much emaciated. On exploration, Tillaux found a stricture at the union of the pharynx and the œsophagus, through which only the smallest olive could be passed. Catheterization and dilatation were now tried for twenty days without any increase in size of stricture, and, on November 5th, Tillaux incised the stricture with Trélat's œsophagotome, having first determined the extent of the stricture with the olive bougie. The section was made from below upward, with a lateral projection of each blade 1 ctm. There was no pain, and only a streak of blood in the saliva. Immediately after the operation the first four olives of the series could be easily passed. There was no subsequent hemorrhage, and only a slight pain in the right lateral part of the neck.

On the fifth day the fifth olive, and on the eighth day the sixth olive, the largest of the series, were passed, which was a little larger than the normal calibre of the œsophagus.

December 8th.—Stricture considered cicatrized, and the patient eats freely as before the accident in Mexico, and he is regaining his flesh and strength rapidly.

CASE IX. (By Studsgaard).[3]—Hilga R——, aged eight, was admitted to the Children's Hospital (Copenhagen), June 30, 1873. Twelve weeks previously, in mistake for water, she had drunk from a bottle a mouthful of a solution of lime and potash, used for washing. Pain in the chest and vomiting followed immediately. Swallowing became difficult, and liquids only could be taken. Treatment by dilatation with elastic catheter was attempted, but it could not be forced through the stricture, and after each trial she brought up some blood. She was getting thin, and spat and hawked up quantities of slime. She could swallow milk without difficulty, and soup and softened bread-crumbs in small quantities. After a few days she could not swallow anything.

July 9th.—Bulbous bougie No. 10 (Charrière bougie) passed through the stricture.

July 12th.—Nos. 12 and 13 passed through. A roughness or scratching was felt by the patient when the bougie passed the stricture. After this she could swallow crusts of bread in small pieces, and blood did not show itself in passing the bougie. After this her condition was variable.

August 16th.—No. 10 went through with difficulty. Stricture was getting longer and harder, and a few places above the first stricture were found narrowed.

September 2d.—Studsgaard had the good fortune to get No. 11 through again. The patient grew paler and thinner.

September 16th.—Internal œsophagotomy was performed by Studsgaard with an instrument having a concealed two-edged cutting blade,[1] much resembling Maisonneuve's instrument, having an elastic point answering to No. 11. The upper end of the stricture was 21 ctm. from the upper incisor teeth. With the head thrown back the instrument was introduced and the incision made from above downward. The knife met a strong elastic obstruction, but passed through freely, after which bougie No. 23 passed easily. She complained somewhat and brought up some blood, but was soon relieved. Two hours afterward she began to feel a severe pain in the cardia and back, which was relieved by throwing up some clear blood. Her voice got thick and she could only speak with difficulty, and three times in the afternoon there was much oppression in the chest and dyspnœa, so much so that she grew bluish red in the face, and it appeared as if she would suffocate. Raising her in bed relieved her, and there was no more vomiting.

September 17th.—Patient slept well during the night, and has pain only in the cardia on pressure and on moving. Voice about natural. Pulse, 90. Bowels moved, after an enema, without sign of blood. Bougie No. 23 passed through. No return of fever. Pain and sensitiveness disappeared altogether.

September 29th.—She could eat crusts of bread, meat, potatoes, etc., and she was not required to take a drink after each mouthful. Bougie No. 27 stuck, but on the following day it passed further down.

October 6, 1873.—The patient was discharged from the hospital, with the advise to continue the treatment of dilatation. She had increased in weight from July 2d, 37.33 lbs.; to October 6th, 48.35 lbs.

After the above report was made the stricture was reported to have gradually returned, notwithstanding continuous dilatation, allowing only Nos. 14–15 to pass, and pockets had formed above the stricture.

Internal œsophagotomy was again performed with the same instrument.

June 5, 1874.—This was followed by dilatation, and at the time this record was made, an œsophageal bougie, of a diameter "2 mm. larger than No. 28," could be passed easily.

---

[1] A portion of this paper was read before the Medical Society of the State of New York at Albany, February 8, 1882.

[2] Tillaux: Contribution à l'histoire de l'œsophagotomie intern. Bulletin Général de Therapeutique Méd. et Chirurgical, Paris, Janvier, 1873, tome 84, p. 14.

[3] Studsgaard, C.: Œsphagotomy interna ved Cicatriciel Strictur. Hospitals-Titende, p. 173. Kjöbenhavn, October 29, 1873.

[1] For illustration vide Hospitals-Titende, loc. cit., p. 174.

Cases X. and XI. were reported by Schiltz [1] to the Society of Physicians at Cologne, December 12, 1876, as cases on which he had performed internal œsophagotomy several years before. An instrument was employed, devised by himself, after the manner of a urethrotome. A description of the instrument will not be published until after the passage of the German patent law.

Case X. (By Schiltz).—That of a woman who had suffered for months from a difficulty in swallowing from a carcinomatous stricture of the œsophagus. Treatment by dilatation being ineffectual, internal œsophagotomy was performed. Pain and hemorrhage was insignificant. The patient was enabled to swallow meat and bread, and a large sound could be passed into the stomach. Gradually, however, the stricture contracted again, so that after several weeks the incision had to be repeated, which was followed by the same successful results. Altogether the incision was repeated five times without pain or hemorrhage, but always with transient success. The patient finally died from tuberculosis which had existed for a long time, life having been sustained by means of the sound to the very last. No autopsy was made.

Case XI. (By Schiltz).—This patient had an œsophageal stricture, thought to be the result of a cicatrized ulcer, which had been produced by strong brandy. In this case, too, the dilatation was unsuccessful and œsophagotomy was resorted to. After the operation, which had caused no small amount of pain, a large sound could be introduced one inch deeper, but not into the stomach, but a smaller sound passed through and revealed a second deeper stricture. Inasmuch as after the operation the patient had hemorrhage, lasting for five hours, which could not be checked by chloride of iron or by sounds retained *in situ*, incision of the second stricture was refused. Death occurred eight days later from increasing failure or exhaustion of the vital powers.

At the post-mortem the incision was found cicatrized, and near it a narrow stricture occupying the cardia, through which a thin lead pencil could be passed with but little difficulty. Schiltz regrets not having recognized the two strictures at first, so as to have incised them both at one sitting. In his opinion this case would then have been cured by the operation.

Case XII. (By Czerny).—A girl, eight years of age, was admitted to the Surgical Clinic, Heidelberg, February 20, 1877, with stricture of the œsophagus, caused by the accidental swallowing of lye ten months previous. The only history obtainable was, that since that time difficulty in swallowing had gradually increased, until only liquids could be swallowed slowly and in small quantities.

When admitted the little patient was pale and emaciated. Upon introducing the œsophageal sound a narrowing of the œsophagus was encountered 18 ctm. from the incisor teeth, about opposite the manubrium sterni, into which an elastic catheter, 4 mm. in diameter, was introduced without difficulty. Pushing the instrument further on, it became tightly engaged, so that a reliable opinion as to the extent of the stricture could not be obtained. Other organs healthy. The stricture was now dilated daily with conical œsophageal bougies, and, March 6th, a sound, 6 mm., could be passed, and liquids, farinaceous food, and soft bread could be swallowed.

March 25th.—Catheter, 7 mm., passed. Finely cut meat could now be swallowed, and the nutrition of the patient much improved.

April 8th.—Child dismissed at request of the parents.

May 16th.—Child readmitted. Return of the dysphagia. A bougie, 5 mm. in diameter, could only be passed with difficulty. Several strictures, "shelves of membrane," were now found—the lowest, the smallest. Tin sounds of Billroth were now used, but they could not be retained for any length of time, owing to pressure against the larynx; and more or less pain in the throat was produced. Continuing the progressive dilatation, the limit of dilatation was not only reached, but the stricture soon began to grow smaller.

May 29th.—It was no longer possible to introduce the thinnest tin sound, and only an elastic bougie, $4\frac{8}{10}$ mm. in diameter, could be passed, even under anæsthesia.

June 9th.—Attempts to dilate stricture with Jameson's dilator failed. All attempts at dilatation having failed, Professor Czerny performed internal œsophagotomy with an œsophagotome, patterned after Ivanchich's urethrotome, only much longer. Patient under an anæsthetic. The stricture was divided from below upward, once to the right and once to the posterior surface, the blade projecting 2 mm. Only a trace of blood seen in the mucus. Immediately after bougies 8 and 10 mm. in diameter passed easily. After recovery from the narcosis there was only slight pain, but several times violent vomiting. In the evening the neck became swollen from the clavicle to the region of the larynx. For the next few days the emphysema increased, until the whole neck from the lower jaw to the clavicle was decidedly tympanitic, and painful on pressure; and swallowing was performed with difficulty. Temperature, $38\frac{6}{10}$° C. to 39° C.

From June 17th emphysema subsided, and by 19th was gone. Only fluids and two raw eggs taken daily.

June 21st.—Diphtheritic deposit upon tonsils and swelling of cervical glands. Chlorate of potash locally and internally. Constant pain in throat, though deposit did not extend. Marked dyspnœa. Without special symptoms, patient gradually failed, and died June 24th, 4 A.M.

Autopsy by Professor Arnold.—Considerable swelling of lymphatic glands of neck. Diphtheritic deposit and filtration of soft palate and tonsils. An abscess was found between the œsophagus and spinal column, extending from the third cervical to the third dorsal vertebræ. Opposite the manubrium sterni it communicated with the pleural cavity on each side. At the fifth and sixth cervical vertebræ there was a wound in the posterior wall of the œsophagus 2 ctm. in length, having smooth-cut edges somewhat infiltrated.

The peri-œsophageal tissue the whole length of the œsophagus was swollen and infiltrated. In the lower third of the œsophagus the mucous membrane was deficient and replaced by cicatricial masses, and at several points large folds of cicatricial tissue. Here, also, there was an extensive communication between the lumen of the œsophagus and the peri-œsophageal abscess. Both pleural cavities contained ichorous pus, the pleural membranes were opaque, and both lungs highly compressed. Death,

[1] Schiltz: Correspondenzblatt der ärztlichen Vereine in Rheinland, Westphalen und Lorthringen, 1877: April, W. 19 S. 19, also vide Braun's article, Œsophagotomia Interna, "Czerny's Beiträge zur Operativen Chirurgie," 1878, p. 70 et seq., which contains an excellent review of all the cases to that date, and from which these two cases are taken, owing to the failure of the writer to obtain a copy of Schiltz's original article.

in this case, says Braun, must be attributed to section through the whole thickness of the walls of the œsophagus, which was followed by an abscess in the posterior mediastinum, which opened into both pleural cavities shortly before death. Perhaps the "fatal exit" was hastened by a diphtheria, which supervened a few days before death.

Case XIII., by Mackenzie, has been given.

REMARKS.—I have cited these cases of internal œsophagotomy more or less in detail, in many of them following the language of the author.

By so doing we are able to study them more closely, and to arrive at a more accurate opinion concerning the operation, its advisability, the best method of performing it, its after-management, and the complications which may arise and which are to be guarded against.

Out of the fifteen cases in which the operation has been performed, there were nine recoveries and six deaths; and but two of the deaths were a direct result of the operation.

In the first two cases by Maisonneuve there was no connection between the operation in the œsophagus and the peritonitis, as was shown by the autopsy.

To explain these singular coincidences, Maisonneuve asks, "if there is not between the peritoneum and the œsophagus one of those mysterious connections which exist between wounds of the head and abscesses in the liver, or between those terrible attacks of pernicious fevers and injuries of the urethra, which have so long puzzled the most scientific anatomists."[1]

As no such sympathy between the peritoneum and the œsophagus appeared in the other thirteen cases, the fact that these two patients were both in the same hospital, and were both attacked by peritonitis on the same day, though operated on four days apart, and dying but one day apart, indicates quite clearly that the peritonitis was occasioned by a common ulterior cause.

In the two cases of Schiltz which terminated unfavorably the one in which the stricture was due to cancer could not be expected to recover, and only temporary improvement could result.

A similar case of cancerous stricture in the upper part of the œsophagus came under the care of the writer a short time ago. Though he was requested to perform an operation, and the case was no more unfavorable than the one of Schiltz, he refused, as there could be no permanent benefit, and discredit would be brought on the operation.

The operation in the second case of Schiltz was successful, so far as it went; but as it was incomplete from failure to divide the lowest and tightest stricture, the result must be considered negative, the same as if no operation had been attempted. Had all the constrictions been accurately determined and carefully divided, the result would doubtless have been quite different.

In the two cases (Czerny's and Mackenzie's) where death ensued as a direct result of the operation, the cause was, in both instances, cutting too deeply and penetrating through the walls of the œsophagus.

These two cases should therefore warn future operators to exercise great care to guard against the occurrence of this almost inevitably fatal accident.

Method of performing the operation.—The operation in itself differs but slightly from internal urethrotomy; and the instrument used is essentially a urethrotome, modified and adapted to the œsophagus.

The instruments used by the operators since Studsgaard have had but one cutting blade.

The advantage of an instrument with but one cutting blade is at once apparent. With it, the side on which the stricture is deepest, as is sometimes the case, can be incised without wounding the opposite side, which may be thin and easily cut through. Also, the side against which external pressure may be exerted, can be avoided, as, by the crossing of the left bronchus, by the aortic arch, or by enlarged lymphatic glands, the resistance of which would increase the danger of penetration through the wall.

We see that in the operations by the more recent operators all the incisions have been made from below upward, which is considered by far the safer method.

The danger attending the incision of a stricture from above downward is not so great in the upper as in the lower portion of the œsophagus, for the reason that the portion of the œsophagus above the crossing of the left bronchus is more rigid, being bound down more firmly than the portion below. The lower portion being more yielding to allow for the great mobility of the diaphragm, and being more markedly curved as it passes forward to enter the cardiac portion of the stomach, would be liable to cause the instrument to impinge with greater force against the lower side and penetrate the œsophageal wall.

It is observed, however, that the only two deaths caused by the operation followed division of the stricture from below upward. This was due, especially in Dr. Mackenzie's case, to the unfavorable condition of the stricture rather than to the method employed.

The limited number of operations and the great variations in different cases which have to be studied independently, prevent the establishing of a specific rule for performing the operation.

Notwithstanding this fact, it may not be amiss to detail briefly the general plan which the writer deems it safest to follow, and which is deduced from the reports of the previous operations and his own experience.

The œsophagus should first be thoroughly explored to determine its exact topographic-anatomical position, in relation to the location and extent of the stricture; the condition of its walls, if atrophied or thinned; the calibre of the stricture compared with that of the œsophagus above, and, if possible, below; and if the stricture be circular or located mainly or wholly on one side.

The exploration of the œsophagus is ordinarily best made with small olive-shaped balls, tapering alike at both ends, made of ivory or hard rubber, in different sizes, and mounted on a whalebone stem.

The writer has also a set of metallic bulbs mounted on a gum-elastic stem. These he finds of advantage in some cases, on account of their weight, as they will drop down the œsophagus by their own gravity, and, having a very flexible stem, will sometimes indicate the condition and location of a stricture more accurately than a light ball mounted on a whalebone stem, which is necessarily more or less rigid.

For determining the side on which a stricture is located or is the deepest, he employs an olive, which he has made with the bulb entirely on one side, as shown in Fig. 3, page 538. At the upper end of the handle is an indicator to show the side toward which the bulb is directed when introduced into the œsoph-

[1] Maisonneuve: loc. cit., p. 413.

agus. By passing the instrument gently down and up, each time turning it partly around, the side on which it meets with the greatest resistance will be indicated as the side on which the stricture is deepest.

After the condition of the stricture is accurately determined, the depth to the upper and also to the lower side of the stricture is measured and marked on the stem of the œsophagotome, taking the upper incisor teeth as the point to measure from.

The œsophagotome is now introduced (the tongue being drawn gently out and held in a napkin), until the upper mark on the stem indicates that the blade has passed through the stricture. The blade is now thrown out and the instrument drawn out until the second mark shows that the blade has cut through the stricture, when it is thrown back and the instrument withdrawn.

If the stricture has been found to be deeper on one side, the blade is turned to that side. Should there be more than one stricture, it is advisable to determine the situation of each, and to divide them separately. If this cannot be done at one time each can be successively dealt with as the passage is cleared above.

In all cases an opening through the stricture must be found before an operation can be attempted, for in plunging a cutting instrument downward without a guide, the danger of making a false passage is apparent.

As in urethrotomy, the treatment of the stricture is by no means ended when the operation has been performed.

For a day or two after the operation the patient should be permitted to take only the blandest substances, in order to avoid irritating the wound. It may sometimes be better not to give anything by the mouth for two or three days, but to sustain the patient by nutritive enemata.

The following day after the operation, dilatation should begin. Without exercising force, the bougies should be gradually increased in size until the fullest extent of dilatation is attained. Should the opening be then insufficient to allow complete alimentation, the operation should be repeated.

In performing the operation it is far better and safer to make several shallow incisions at intervals, and follow each by dilatation, than to make one or two deep incisions at one time.

Afterward, notwithstanding the fact that nearly all of the cases operated on have been reported as remaining permanently cured, the precaution of occasionally having the bougie introduced should be urged, for, as in urethral strictures, there may remain some contractility of the tissue at the former site of the stricture which may cause it to return.

Indications for the operation.—In the treatment of œsophageal stricture the time-honored sound still maintains its recognized place, for it is only after a patient and thorough use of the sound has failed, and other means of alimentation have also failed, that resort to the operation of internal œsophagotomy is justifiable.

The assertion by Hüter [1] that all strictures through which a sound can be made to pass can be cured by dilatation is entirely disproved by these cases, for in each one it was only after the sound had completely failed that the operation was resorted to.

The operation of internal œsophagotomy is clearly indicated in all forms of stricture of the œsophagus caused by membranous or cicatricial formations. Membranous formations usually arise spontaneously, as was seemingly the case in the first patient operated on by the writer. They may also be of congenital origin.

Three cases of membranous contraction in the upper part of the œsophagus, supposed to be congenital, are reported by Zenker and von Ziemssen.[1]

In all three the stenosis was located at the entrance of the œsophagus. In two cases it was a simple ring about the tube; in the third the canal was narrowed by membranous bands for a distance of eight millimetres.

Illustrative specimens, both of spontaneous and congenital membranous formations are preserved in the museum of the College of Surgeons, London.[2]

One (No. 1,079) shows a stricture of the œsophagus from a fold of mucous membrane. Just below the cricoid cartilage the œsophagus gradually contracts to half its diameter and then dilates. The mucous membrane, at the contracted part, forms transverse, sharp-edged, and projecting folds, which pass around the chief part of the circumference of the tube.

Cicatricial formations are most commonly the result of swallowing some acrid substance, as sulphuric acid, nitric acid, lye, or caustic potash, though any substance sufficiently acrid to produce erosion or destruction of the mucous membrane will give rise to cicatricial formations.

Respecting the changes in the œsophagus which result from the swallowing of an acrid substance, Rokitansky remarks that when "mucous membrane has been destroyed by the energetic action of the poison, it is replaced by serous and sero-fibrous tissue, which gives rise to peculiar valvular strictures of the œsophagus, somewhat analogous to those consequent on dysentery." [3]

Strictures will sometimes contract to a certain point and then remain stationary for many years without showing signs of further contraction and not requiring any operative interference. An interesting case of this character is reported by Easton.[4]

A man, aged twenty-five years, swallowed by mistake a corrosive liquid, which produced a stricture in the lower part of the œsophagus. He was unable to swallow any solid food, and being fond of milk and cake, he made them his exclusive diet, living upon them fifty-five years, and being able to perform laborious farm work.

Instances are also reported in which cicatricial strictures have yielded spontaneously when death from starvation seemed imminent.

Braun refers to two cases. One reported by Ashurst,[5] where a stricture caused by swallowing lye, resulted in a spontaneous cure. One by Hutchinson,[6] caused by swallowing caustic potash, in which gastrotomy had been proposed but not performed, also yielded spontaneously.

When, however, the stricture contracts notwithstanding the most careful and thorough use of the sound the operation of internal section should be resorted to while the opening is sufficiently large to admit the œsophagotome.

[1] Jahresbericht über die Leistungen und fortschnitte in der gesammten medicin, von Virchow und Hirsch, 1873, Bd. II., S. 485.

[1] Ziemssen's Cyclopædia, vol. viii., p. 18.
[2] Holmes' System of Surgery, London, second edition, vol. iv., p. 490
[3] Path. Anat., vol. ii., p. 10.
[4] Easton, C. M.: Chicago Medical Journal and Examiner, 1879. vol. xxxviii., p. 158.
[5] Ashurst, S.: Stricture of the Œsophagus from Swallowing Lye. Am. Jour. Med. Science, 1870. p. 393.
[6] Hutchinson, Jonathan: Case of Stricture of the Œsophagus after Swallowing Caustic Potash. Gastrotomy Proposed but not Performed. London Hospital Reports, vol. iv., p. 56.

Even on a limited search through medical journals and hospital reports we shall find numerous instances recorded where patients have died from starvation with œsophageal stricture (or from external œsophagotomy, or gastrotomy, performed in the attempt to avert this result), when it was found on post-mortem examination to have been caused by narrow bands of cicatricial or elastic tissue, or membranous folds, in which, if the operation of dividing them by internal section had been made, the obstruction could have been readily and permanently removed.

Contra-indications. — The operation of internal œsophagotomy is contra-indicated in all cases where the walls of the stricture are atrophied or contracted so as to greatly reduce the external circumference of the œsophagus, or where the narrowing of the tube is produced by diseased conditions located in the walls or by pressure from without.

It is especially contra-indicated in cancerous contractions. It is equally true, here as elsewhere, that when a cancerous tumor cannot be completely extirpated, the use of the knife only goads it to a more rapid growth.

Dangers attending the operation.—As accidents are liable to occur in every operation, either during or after the performance, an understanding of them will the more readily enable us to prevent them.

The complications which have been thus far observed to attend or follow this operation are cutting through the wall of the œsophagus, hemorrhage, pain, pneumonia, dyspnœa, emphysema, and œsophagitis.

The greatest danger attending the operation is that of cutting too deeply and penetrating through the wall of the œsophagus, and the escape of blood and other substances into the surrounding parts, and the consequent formation of peri-œsophageal, mediastinal, or pleural abscess, which is inevitably fatal.

Hemorrhage.—In nearly all cases the hemorrhage was so inconsiderable as only to tinge the saliva. In the first patient operated on by the writer there was slight hemorrhage, which continued for two or three hours, but subsided spontaneously and did not recur.

Hemorrhage may, however, prove a serious complication, as it did in the cases of Trélat and Schiltz. This was undoubtedly due to the unnecessary depth of the incision, and the wounding of an arterial branch leading into the stricture that had become enlarged in consequence of the diseased action going on in the morbid tissues of the stricture, rather than simply to incising the œsophageal wall, as in both instances in which this accident occurred there was almost entire absence of hemorrhage.

In the one by Trélat, he had made two incisions which gave him an opening of from ten to eleven millimetres. He now sharpened the blades to the point, and opened them two centimetres on making the incision. A glassful of blood was immediately lost, and followed next day by bloody stools.

On the twelfth day after, secondary hemorrhage occurred from straining at stool, and again on the thirteenth day, losing in the aggregate, it was estimated, four hundred grammes.

Braun[1] considers that the last operation was quite unnecessary as the nutrition of the patient could have been very well accomplished through an œsophagus whose lumen was from ten to eleven millimetres, which was present before the third incision was made.

Bearing on this point Trélat[2] remarks that it is the surface of the stricture rather than the diameter that is to be compared. When a stricture is enlarged from eight to twelve millimetres, the diameters are in a ratio of eight to twelve, while that between the surfaces is as four to nine.

In the second case by Schiltz, quite profuse hemorrhage occurred, which lasted five hours and could not be controlled by chloride of iron or by sounds retained *in situ*.

Pain.—Excepting the second case of Schiltz the operation in every instance was painless—so much so that an anæsthetic was entirely unnecessary, though one was administered by Czerny. In the case of Schiltz it was evidently due, either to the unnecessary depth of the incision or to an extremely sensitive or neuralgic condition of the œsophagus.

Pneumonia is a complication which may arise as a direct result of a wound inflicted on a part so closely contiguous to the lungs as the œsophagus. In the case in which it occurred—Mackenzie's—it was produced evidently by the pleuritis resulting from the incision through the œsophageal walls.

Œsophagitis.—More or less œsophagitis may also be occasioned by the incision, as was observed in Trélat's case, though it quite readily subsided on the withdrawal of all irritants.

Dyspnœa is a more rare complication, as it has occurred in but one case, that of Studsgaard. It was here evidently due to distention of the œsophagus by blood, as it was immediately relieved by vomiting, and the unloading of the œsophagus. The dyspnœa from distention of the œsophagus being produced either by direct pressure against the trachea or by pressure on the pneumogastric nerve, causing by reflex irritation spasm of the larynx, as so frequently occurs when foreign bodies have become lodged in the œsophagus.

Emphysema is also an infrequent complication, as it was only observed in Czerny's case.

This was certainly caused by air entering the cellular tissue through the opening in the œsophagus made by the incision and the violent vomiting after the operation. It could not have been due to injury to the lungs, as the lung-tissue cannot be easily reached by a vertical incision directly through the posterior wall of the œsophagus.

Emphysema is a phenomenon which also sometimes occurs, from the lodgment of foreign bodies in the œsophagus and from violent vomiting. An interesting case has been recently reported in which emphysema of the face, neck, and chest, followed the lodgment of a piece of pork in the œsophagus.[1]

A case similar is also cited by Poulet.[2] For emphysema to occur in such cases Poulet states that the mucous membrane must be perforated to place the cellular tissue in communication with the air, most frequently by means of a communication with the trachea.

From an analytical review of these cases the following deductions can be drawn:

First.—That the operation of internal œsophagotomy for the division and removal of the membranous or cicatricial constrictions or obstructions in the œsophagus is established beyond question as a justifiable operation; and in all cases where it is clearly indicated it is the only warrantable operation for relief against impending starvation.

[1] Braun: Czerny's Beiträge, Loc. cit., p. 89. [2] Trélat: Loc. cit.

[1] Morgan, W. Lewis: Foreign Body in the Œsophagus, followed by Surgical Emphysema. London Lancet, April 8, 1882, p. 565.

[2] Poulet, A.: Foreign Bodies in Surgery, vol. i., p. 79. Wood's Library, 1880.

Second.—That it is a safer operation in its immediate results, and is attended by fewer complications than external œsophagotomy or gastrotomy.

Third.—Notwithstanding that it is a safer operation than external œsophagotomy or gastrotomy, when done with equal care and skill, it is one requiring great care and ofttimes the utmost surgical and manipulative dexterity, for the careless and reckless performance of it, even in the most favorable cases, would at once lead to the most serious consequences.

Fourth.—That it is an operation applicable to strictures in every region of the œsophagus, whereas external œsophagotomy is only applicable to those located in the region above the sternum.

Fifth.—That, as in external œsophagotomy and gastrotomy, it is an operation to be undertaken only when dilatation of the stricture has failed.

Sixth.—That success in this operation means a permanent relief to the patient and cure of the stricture. The restoration of the œsophagus to a normal condition rendering alimentation normal and leading at once to comfort and freedom from annoyance, whereas success in œsophagotomy or gastrotomy necessarily means a life of continued torment, the patient being in constant danger of the most serious complications and unfavorable terminations.

Seventh.—That the operation does not dispense with the use of the sound, but renders its use rapidly effective.

Eighth.—That it is inadmissible in strictures through which an opening cannot be found.

Ninth.—That it is contra-indicated in every instance in which the obstruction is cancerous or of a malignant nature, or caused by conditions external to the lumen of the œsophagus; where the walls are greatly atrophied, thinned or indurated; and where internal urethrotomy would be impracticable under like conditions of the urethra.

The Mud-Baths of Europe represent a stage of therapeutics which America has not yet reached. A correspondent of the *Cincinnati Lancet and Clinic* gives an interesting description of them: "Here in Austria they excavate a marsh where decaying vegetable mould and water is in abundance, cart it to the bath-houses, grind it in a mill and pass it into a large tank, where it is mixed with water and heated by steam. From the tank it is drawn off into portable bath-tubs, where it is again mixed, more water added, and the temperature brought to the desired grade. Then it is wheeled into the bath-room and the unfortunate bather plunges into a black, bad-smelling mixture, where he remains from twenty minutes to half an hour, when he steps into a second tub, full of pure water, to cleanse himself. The moor is too precious to be wasted, so after being used it is deposited in a great heap, where it is said to remain ten years before it will be fit for use a second time. These heaps remind one in more ways than one of those which the dairy farmer accumulates behind his cow stable. The moor-bath is popularly believed to be very beneficial in all cases —a veritable cure-all. The physicians questioned on the subject were unwilling to commit themselves as to its indications and effects, except in the case of hypochondriacs, with one exception, and he said where a poultice for the whole body was necessary he knew of no more convenient method of applying it."

MEDICAL LATIN.

By JOHN A. ARMSTRONG, Esq.,
BROOKLYN, N. Y.

An eminent Scotch physician and lecturer, addressing his class one hundred years ago, said: "I hope I have no need to recommend to you a *thorough* acquaintance with the Latin tongue. A physician's reading must be confined within very narrow bounds who is unacquainted with what *has been* the universal language of the learned in Europe for so many ages. . . . The interests of learning will very soon suffer by its disuse."

Doubtless, as it seems to us now, a very extravagant estimate of the importance of the Latin language, but one which was fairly justified by the condition of scientific learning generally at that time. Every educated man in Europe was presumed to be capable of writing Latin, which thus became the common medium of intercommunication. French was merely a colloquial language—the language of the courtier. Latin was the language of science and philosophy. The other languages of Europe were little studied. Comparative philology was as yet unknown. It had not come, as it has since, to be an acknowledged fact that it requires less time to master all the languages of Europe than it does to acquire "a *thorough* acquaintance with the Latin tongue."

That period has passed, with many of its learned prejudices, and Latin no longer jealously monopolizes the attention of youth to the exclusion of the living languages. Latin has ceased to be "the universal language of the learned;" but instead of suffering to any great extent, "the interests of learning" seem rather to have been benefited, inasmuch as the light of philological investigation has cleared up much that was hitherto unexplained in Latin and Greek. An American physician acquainted with French or German has now no need of Latin in order to exchange views with his brethren on the continent of Europe. Nor is it even necessary for an American physician to understand French or German in order to keep *au courant* of the current literature of Europe. Every work now-a-days which possesses merit enough to sell well finds translators everywhere.

To medicine and pharmacy, however, Latin holds the old relation. It is still the universally recognized medium of professional intercourse between physician and pharmacist, and will long continue to be such, despite the attacks which have been made on it in this relation.

M. Victor Hugo has savagely assailed the technical Latin of medicine and of the professions generally, attributing to it the same questionable purposes as those subserved by Argot.

A portion of the press, here and in England, has endeavored from time to time, to bring into disfavor the practice of writing prescriptions in Latin, arguing that it belongs to a past age, and that serious mistakes would be less frequent if it were the practice to write prescriptions in English. All very well, provided physician, patient, and pharmacist all understand English. But let us suppose, nor is it a thing altogether impossible here in America, that a United States physician or an English physician has occasion to prescribe for a patient in a community where two-thirds of the pharmacists are Spaniards and the remaining third German and French. What is he to do, supposing he can neither read nor write Spanish, German, or

French, and no one near him understands a word of English? He has recourse to the universal medium; he writes his prescription in Latin, and, whether it goes to a Spanish, German, or French apothecary, the desired remedy is forthcoming. Is any other argument necessary to show that if Latin did not happen to be the language already established as the universal language of physician and pharmacist, the necessity for some such medium would compel them to adopt it or some other? But Latin having been so long and so illustriously idenfied with the literature of medicine, and having contributed so largely to its terminology, it is not easy to see how it could be advantageously superseded by any other language.

The only objection which can be urged with any appearance of fairness against the practice of writing prescriptions in Latin is that they are sometimes written by persons who are not competent to write them. There can be no objection to sound Latin, legibly written. A prescription in doubtful Latin, written illegibly, is too dangerous to be meddled with.

Every physician is presumed to know Latin well enough to be able to write a prescription correctly. There is hardly a drug store in New York in which cannot be found abundant proof that the contrary is the fact. Indeed, to those who have opportunities for observation, it is only too deplorably evident that the degree of proficiency in Latin which is exacted of matriculates in medicine is not very high. The practice of abbreviation in prescriptions renders the study of syntax unnecessary. It would be well if prescriptions, under all circumstances, were written out in full without any but the mere technical abbreviations representing quantities.

To acquire a competent knowledge of the Latin of medicine and pharmacy does not imply in these practical times that the physician must be a thor ough Latinist; and yet it is quite possible for him not only to acquire all of the language which will be necessary to him in his profession, but with it a more correct knowledge of the construction of the language generally, than that possessed by some of the reputedly learned physicians of the last two centuries. This result will be attained by a new and discriminative method of instruction. The old method, for those who intend to become medical men merely, and not great scholars, is a waste of time and attention, to which the more important study is better entitled.

In the beginning of the present century medicine still numbered among her votaries, eminent scholars, like Boerhaave, Van Swieten, and Cullen, who wrote Latin with elegance and facility; but the exactions in this department of knowledge, being extravagant in consequence of such examples, pretensions to scholarship were much more common than the evidences of its possession. Of this fact we find proofs in the contemporary literature of the profession itself; such, for instance, as the ludicrous etymological blunders in "Fyfe's Anatomy," "Hooper's Vade Mecum," and other works, regarded in their day as infallible authorities.

Having had occasion to compare several works on medicine and pharmacy within the past year, I have been frequently amazed at the bad Latin to be met with in the best of them.

On the adoption of our present pharmaceutical nomenclature, the London and Edinburgh Colleges of Physicians differed in assigning the gender to such nouns as *carbonas*, *murias*, *sulphas*, etc.; the London college (rightly, according to analogy), making them feminine, and the Edinburgh college, for no apparent reason, making them masculine; which accounts for many apparent errors formerly to be found in the pharmacopœias and dispensatories—the result of quoting different authorities.

Allowance being made for such discrepancies, one of the most carefully edited works on the pharmacy of its day, was a little volume, entitled "A Conspectus of the Pharmacopœias of the London, Edinburgh, and Dublin Colleges of Physicians; being a Practical Compendium of Materia Medica and Pharmacy. By Anthony Todd Thomson. London, 1824."

In this work, not only is the gender of the noun given, but the quantity of a syllable, where otherwise liable to be mistaken, is marked by the long or short sign; the importance of which feature in the case of such words as *ricinus*, *lavandula*, etc., is sufficiently obvious. In this work, *carbonas* is intentionally feminine when the "London Pharmacopœia" is quoted; masculine when the "Edinburgh Pharmacopœia" is quoted, but never neuter.

For the discrepancies which abound in works on pharmacy, published in later times, there is neither reason nor excuse.

One of the volumes which engaged my attention was a neat little 12mo, entitled "Selecta e Prescriptis; or, Selections from Physicians' Prescriptions, containing Lists of the Terms, Phrases, Contractions, and Abbreviations used in Prescriptions, etc., with Examples of Prescriptions, grammatically explained and construed, etc., etc. Seventh edition. Much improved. London, 1837."

At page 34, in an enumeration of the parts of the body we find "*cubitus*, the fore-arm," and a foot-note informing us that *cubitus* "signifies, also, a lying down;" the author not being aware, apparently, that *cubitus*, the fore-arm, and *cubitus*, a lying down, are two different nouns and of different declensions.

At page 75, in the line—

℞. Ferri carbonatis, ʒ jss.

the abbreviation "ss.," is thus "grammatically construed." "*Cum*, preposition governing the ablative case; *semisse*, a substantive, ablative case sing., from *semissis*, *-is*, *f.*, third decl., governed by *cum*"! The author not being aware, apparently, that *semis*, the noun here used is neuter, indeclinable, and means half of anything; while *semissis*, which is masculine, means half a pound!

On page 68, is given the Latin rule, "One substantive agrees with another signifying the same thing, in case; as, ℞. *potassæ tartratis unciam.*" Where, as any school-boy would perceive at a glance, *potassæ* holds to *tartratis* precisely the same relation that *tartratis* holds to *unciam;* none of the substantives being in apposition at all.

On the very next page is the proper rule for this construction: "One substantive governs another, signifying a different thing, in the genitive." After an example, the author rightly observes in an interjectional note, "The substantive governed may govern another signifying a different thing; as, *drachma sodæ carbonatis.*"

"A Hand-book of Hospital Practice; or, An Introduction to the Practical Study of Medicine at the Bedside." By Robert Lyons, K.C.C., M.B.T.C.D., L.R.C.S.I., M.R.I.A., etc., London, 1859," contains, among other things, "Directions for Writing Prescriptions," and a "Glossary." In the former, is given what the author is pleased to call "a classic prescription

secundum artem;" in which we find one of the ingredients written "*aquæ menthis*" (menthæ?) "*piperitæ.*" To the "Glossary" is prefixed an "N. B.," informing us that "nouns ending in *a* are feminine, and declined like *musa*, except when a different gender and declension are given." And on the same page we find *asthma* and *atheroma*, with neither gender nor declension indicated, though farther on we find "*enema, -tis*, n." And we find *crepitus, -i*, m., instead of *crepitus, -ús*, m.

Every one has seen "A Dispensatory and Therapeutic Remembrancer, comprising the Entire Lists of Materia Medica, Preparations and Compounds, etc., as authorized by the London, Dublin, and Edinburgh Royal College [Colleges?] of Physicians, in the latest editions of their several Pharmacopœias, etc. By John Mayne, M.D., F.R.C.S., Edin." (Reprint of Lea & Blanchard, 1848.)

In this work we find the following extraordinary instances of mutability of gender: *Calcis carbonas præparatum*, page 34; *potassæ carbonas purus*, page 39; *sodæ murias purum*, page 46; *zinci carbonas præparatus*, page 78.

In "Gray's Supplement to the Pharmacopœia," a bulky and costly English work, which has run through numerous editions, we find: *Calcis phosphas præcipitatum*, page 629; *ferri carbonas saccharatum*, page 703; *carbonas ferri præcipitatus*, page 707; *potassæ carbonas purum*, page 836; *potassæ nitras fusa* and *potassæ nitras depuratum*, both on page 840; *sodæ carbonas exsiccata*, page 867.

It is in the highest degree creditable to the ability and care of the gentlemen hitherto engaged in the compilation of the "United States Pharmacopœia," that their work is disfigured by no such blunders. Such words as *carbonas sulphas*, etc., in the "United States Pharmacopœia," are rightly made to follow the analogy of their class of nouns of the third declension, and are qualified by adjectives in the feminine gender. We find, however, in a recent report of the American Pharmaceutical Association's Committee on the Revision of the "United States Pharmacopœia," page 119, the expression *rhus glabra* recommended to take the place of *rhus glabrum*, but no reason assigned for the proposed change. Why, *rhus glabra? Rhus glabra* is very proper sometimes; but the propriety of writing *rhus glabra* or *rhus glabrum* must depend on the part of the tree which it is meant to designate. If the bark or leaves are meant, by all means let us have *rhus glabra;* if the berry or seeds, *rhus glabrum*. Now, our officinal *rhus* is the berry or seed; and the noun is of the second declension. But where the name of a fruit-tree is of the second declension feminine and ends in *us*, the name of the fruit is neuter; as *malus*, an apple-tree; *malum*, an apple; *pirus*, a pear-tree; *pirum*, a pear. *Rhus*, the fruit or berry is exceptional in not taking the neuter termination; but Pliny and Celsus both make *rhus* neuter when they use it to express the *berry* or seed of the *Syrian sumach. Stet rhus glabrum.*

THE ODOR OF DEATH.—Dr. E. A. de Cailhol, of St. Louis, asserts (*Southern Clinic*) that he has the faculty of telling when death is to occur by a peculiar odor which he smells or sensation which he feels. He can detect this odor, he says, within twelve to forty-eight hours before death. Dr. C. evidently believes in this grim idiosyncrasy, but cites few instances to prove it.

A COMPARISON OF THE BODILY TEMPERATURE IN DIFFERENT SITUATIONS.

BY HENRY LING TAYLOR, M.D.,

HOUSE PHYSICIAN, ROOSEVELT HOSPITAL.

IT is generally taken for granted that the temperature of the human body is about a degree Fahrenheit higher in the rectum than in the axilla. That a rectal temperature is usually higher than an axillary may be readily admitted (and I shall adduce a series of observations which show this), though the difference varies between quite large limits; the average being, as we are in the habit of assuming, in the neighborhood of 1° F.

That this rule is subject to some remarkable exceptions was observed by the House Staff of Roosevelt Hospital in 1880, while taking simultaneous rectal and axillary temperatures on at least two cases of typhoid fever. These observations were frequently repeated with tested instruments and were verified by the entire medical house staff, so as to leave no margin for any error sufficient to explain away the results obtained.

The first case, a girl, aged sixteen, was admitted to the hospital October 14, 1880, with typhoid fever, having been sick three weeks.

I subjoin all the temperatures noted in the records as taken simultaneously in the axilla or rectum (or first in one position and immediately afterward in the other with the same thermometer).

Date.	Hour.	Axilla. Degrees.	Rectum. Degrees.	Difference. Degrees.
Oct. 19, 1880..	2.45 P.M.	103.0	101.4	—1.6[1]
Oct. 19, 1880..	4.45 P.M.	101.8	100.0	—1.8
Oct. 19, 1880..	7.45 P.M.	103.4	103 0	—.4
Oct. 19, 1880..	9.45 P.M.	102.6	102.8	.2
Oct. 19, 1880..	11.45 P.M.	102.2	102.8	.6
Oct. 20, 1880..	11.30 P.M.	102.2	103.0	.8
Oct. 21, 1880..	10.45 P.M.	104.4	105.0	.6[1]
Oct. 22, 1880..	9.30 A.M.	100.8	101.2	.4
Oct. 23, 1880..	9.30 A.M.	102.6	102.2	—4

Two affusions were given while the temperatures were being taken; one just before, October 18th at 8.30 P.M., and one on October 21st at 11.10 P.M.

The second case was a man, aged twenty-four, admitted November 12, 1880, with typhoid fever, having been sick in bed a week.

Date.	Hour.	Axilla. Degrees.	Rectum. Degrees.	Difference. Degrees.
Nov. 14, 1880..	7.15 P.M.	105.4	106.0	.6
Nov. 14, 1880..	11.00 P.M.	102.6	102.2	—.4
Nov. 15, 1880..	2.15 A.M.	101.8	102.4	.6
Nov. 15, 1880..	5.15 A.M.	101.4	101.8	.4
Nov. 15, 1880..	10.00 A.M.	101.8	101.6	—.2
Nov. 15, 1880..	1.00 P.M.	104.6	105.2	.6
Nov. 15, 1880..	4.44 P.M.	105.0	105.4	.4

During this time affusions were given as follows: November 14th, 4.10 P.M.; November 14th, 7.15 P.M.; November 15th, 1.30 P.M.; November 15th, 4.24 P.M.

[1] — Denotes that the difference is in favor of the axillary temperature.

The last temperature in the table was taken during the affusion.

On the other hand, in collapse, or at the moment of death, the difference in favor of the axillary temperature is increased. In a case of collapse from rupture of the intestine the temperature, thirteen hours before death, was: Axilla, 101.5°; rectum, 103.8°; difference, 2.3°.

In a case of typhoid fever where the prostration was profound, the extremities cold and the pulse a flicker, the following temperatures were observed three days before death:

Date.	Hour.	Axilla. Degrees.	Rectum. Degrees.	Difference. Degrees.
Nov. 1, 1882..	9 A.M.	103.2	105.4	2.2
Nov. 1, 1882..	12 M.	103.4	106.1	2.7
Nov. 1, 1882..	7 P.M.	104	106.4	2.4

Showing the unreliability of axillary temperatures in the later stages of this disease.

Two minutes after death, in a case of typhoid fever, the temperature was: Axilla, 103.8°; rectum, 107°; difference, 3.2°.

In order to determine the average difference between axillary and rectal temperature, Dr. J. B. McMahon, then House Physician, instituted a series of simultaneous observations, taken regularly morning and evening by Dr. Wm. T. Van Vredenburgh, then Junior Assistant Physician, in a case of typhoid fever, a girl sixteen years of age. The results were as follows:

Date.	Morning or Evening.	Axilla. Degrees.	Rectum. Degrees.	Difference. Degrees.
Dec. 23, 1881..	A.M....	103.0	103.4	.4
	P.M....	102.0	103.8	1.8
Dec. 24, 1881..	A.M....	101.2	102.4	1.2
	P.M....	103.8	105.0	1.2
Dec. 25, 1881..	A.M....	101.3	103.6	2.3
	P.M....	102.8	104.7	1.9
Dec. 26, 1881..	A.M....	102.6	103.8	1.2
Dec. 29, 1881..	P.M....	100.0	101.2	1.2
Dec. 30, 1881..	A.M	101.8	102.8	1.0
	P.M....	102.3	103.2	.9
Dec. 31, 1881..	A.M....	96.6	97.8	1.2
	P.M....	100.8	101.6	.8
Jan. 1, 1882...	A.M....	97.2	98.2	1.0

In two other cases of typhoid and one of remittent fever, these were the results:

Date.	Disease.	Axilla. Degrees.	Rectum. Degrees.	Difference. Degrees.
Sept. 10, 1881	No. 1, typhoid..	102.7	103.9	1.2
Aug. 20, 1881	No. 2, typhoid..	103.0	103.7	.7
Sept. 1, 1881	No. 3, remittent	105.4	106.4	1.0

The average difference of these sixteen observations is nearly 1.2°.

A series of observations on simultaneous axillary and vaginal temperatures was also instituted on the patient who furnished the largest number of data for the preceding table.

Date.	A.M. or P.M.	Axillary. Degrees.	Vaginal. Degrees.	Difference. Degrees.
Jan. 1, 1882..	P.M.....	100.1	101.0	.9
Jan. 2, 1882..	A.M.....	97.0	97.8	.8
	P.M.....	98.2	99.0	.8
Jan. 3, 1882..	A.M.....	97.8	98.7	.9
	P.M.....	98.4	99.4	1.0
Jan. 4, 1882..	A.M.....	98.3	99.5	1.2
	P.M.....	97.4	98.5	1.2
Jan. 5, 1882..	A.M.....	98.2	98.9	.7
	P.M.....	98.2	99.0	.8
Jan. 6, 1882..	A.M.....	97.0	98.3	1.3
	P.M.....	97.9	98.3	.4
Jan. 7, 1882..	A.M.....	97.6	98.5	.9
	P.M.....	97.4	98.5	1.1
	A.M.....	96.0	98.6	2.6
Jan. 8, 1882..	P.M.....	104.2	104.7	.5
	9 P.M...	102.2	103.5	1.3
Jan. 9, 1882..	A.M.....	96.9	98.3	1.4
	P.M.....	96.8	98.2	1.4
Jan. 10, 1882..	A.M.....	99.8	100.8	1.0

The average difference in these nineteen observations is nearly 1.1°.

Five weeks later, two observations showed in the same patient the axillary temperature higher than the vaginal: February 17th, P.M., axillary, 97°; vaginal, 95.8°; difference, —1.2. February 18th, A.M., axillary, 97.6°; vaginal, 95°; difference, —2.6°.

The vagina was somewhat patulous from emaciation of patient.

In seven comparisons of simultaneous mouth and axillary temperatures taken by the Junior Assistant Physician, Dr. Duncan Emmet, in five different cases, the following were the results.

Date.	Case No.	A.M. or P.M.	Axilla. Degrees.	Mouth. Degrees.	Difference. Degrees.
Oct. 24, 1882..	1	A.M.....	96.7	97.5	.8
Oct. 25, 1882..	1	A.M.....	97.1	97.3	.2
Oct. 24, 1882..	2	A.M.....	96.7	97.5	.8
Oct. 25, 1882..	3	A.M.....	98.5	98.7	.2
Oct. 25, 1882..	4	P.M.....	101.9	102.5	.6
Oct. 25, 1882..	5	P.M.....	102.3	102.6	.3
Oct. 26, 1882..	5	A.M.....	102.1	103.8	1.7

The average difference of these seven observations is over .6° in favor of the mouth.

The above tables comprise *all* the observations I could find recorded in the hospital books of temperatures taken simultaneously in different parts of the body.

It is perhaps hardly justifiable to draw conclusions from such a limited number of observations, but I may perhaps be allowed to provisionally sum up the results of these observations as follows:

First.—The difference between axillary and rectal and axillary and vaginal temperatures is not constant, but averages about 1° F. in favor of the rectum and vagina.

Second.—In certain exceptional cases the temperature may be considerably higher in the axilla than in the rectum or vagina.

Third.—The difference does not seem to vary directly with the height of the temperature.

Fourth.—The difference in favor of the mouth, in buccal and axillary temperatures, averages about one-half that in favor of the rectum and vagina, when axillary temperatures are compared with the latter.

Reports of Hospitals.

BELLEVUE HOSPITAL, NEW YORK.

CLINIC OF PROFESSOR L. A. SAYRE.

DIASTASIS OF THE HEAD OF THE LEFT FEMUR IN A CHILD EIGHT YEARS OF AGE MISTAKEN FOR MORBUS COXARIUS.

THIS case was that of a little girl eight years of age, sent on account of supposed hip-disease.

The father stated that she had always been lame, her left leg had always been shorter than the right. On examining her with great care, no disease whatever of the hip-joint was found. The legs were parallel, and the shortened limb could be drawn to an even length. The leg could be flexed in every possible direction, but when the two were placed together the left leg was one and a half inches shorter than the other, and it lay perfectly parallel with the opposite limb; the foot was parallel also. If this had been the result of dislocation upon the dorsum of the ilium, the foot would be turned in; if it had gone on to the third stage of hip-disease, it would result in shortening of the head from absorption and enlargement of the acetabulum from carious degeneration, the foot would also be turned in and at the same time anchylosed more or less completely, and we would have that distortion or inversion and crossing of the limb peculiar to the third stage of hip-disease.

Standing the little child so as to expose her back, she had the appearance of lateral curvature, because the left leg was shorter and she was compelled to twist the pelvis to place the left foot on the ground. That lateral curvature depended, of course, entirely upon the shortened leg. The trochanter major on the left side was "clear up" near to the crest of the ilium, as was shown by Nélaton's test. The latter was given as follows: We pass a string from the tuberosity of the ischium around the thigh posteriorly to the anterior superior spinous process of the ilium, and if the femur is normal, the head in its acetabulum, that line ought to pass directly over the top of the trochanter major. That is called "Nélaton's test."

The trochanter was one and a half inch above that line. When the neck of the femur was broken the trochanter also rode above that line.

The case was diagnosticated not as one of diseased hip-joint, but of diastasis. Nature had made an artificial joint, but not having any buttress, allowed the femur to glide up upon the ilium, and had made the child lame and greatly deformed.

Dr. Sayre had made an instrument for bringing that limb down and retaining it there so that Nature might create a new joint in as favorable a position as possible.

In this connection allusion was made to a child brought to him when six years of age, in which he found there was no disease of the hip, but there had been a fracture of the neck of the femur. The leg was flexed nearly at right angles and quite firmly anchylosed. He broke up the adhesions, divided the tendons, and brought the limb to a natural position; then, putting on a long splint, the leg was kept in that position until it formed an eburnated condition of the bone, and the head of the femur became rounded to fit this place, and made a perfectly good movable joint. The child ran around for some three years or more with simply a shortened limb, dying eight years after from double pneumonia, and I obtained the ilium showing the acetabulum nearly obliterated. Previous to death, for two or three years the child could walk without any artificial aid whatever, with the exception of a high-heeled shoe to equalize the length of the limbs.

In describing the treatment, Dr. Sayre continued: Now, this is what I propose to do with this child. I intend to pull the limb out. Now, if I can keep it in that place and allow her to make free motion, it will thus give Nature a better opportunity for forming a new joint than if left to be pressed up on the dorsum of the ilium.

The instrument is simply a pelvis belt, with two perineal straps. On the outside of the distorted limb a shaft, as you see, runs down which connects with the belt by a movable joint, and has at the same time a hinge which will either abduct or adduct, there is also a joint at the knee to allow the child to sit down; at the lower part of the shaft is another shaft running into the other, capable of adjustment, this terminates in a small axle running under the shoe, which axle fits into a little box. There is also a band which goes loosely around the knee to assist in retaining the instrument in position. In putting this instrument on, you have the pelvis belt go around just under the crest of the ilium, and have the perineal bands buckled on either side, putting some soft rags between the bands and the perineum to absorb the perspiration; these should be changed every day, otherwise the velvet becomes hard and irritating; it is also desirable to wash the perineum for a time every night with a little alcohol and alum.

Now the box for the axle being screwed fast to the shoe under the instep, the axle being slipped in and fixed, the pelvis belt fastened, and the perineal bands buckled, the instrument is screwed out and adjusted by the application of a key. The limb is now extended until the trochanter major has passed nearly an inch below the lower border of the pelvis belt, which it remained against before the extension was applied.

Now, as the child stands up, you will observe that the limbs are of equal length and the lateral curvature has disappeared.

The child then walked around with the greatest ease.

This is the first experiment on this child; had the case been diagnosticated earlier there would have been a much better opportunity to get a good result than there will now be.

CONSERVATIVE SURGERY IN CHRONIC DISEASE OF ANKLE-JOINT.

The case was a boy who had come to the clinic a year ago with chronic disease of the knee-joint.

The foot was a shapeless mass and intensely painful, with numerous sinuses leading to dead bone, and had been condemned to amputation by three of the surgeons of the hospital. Dr. Sayre was not aware at the time of their conclusion, and determined upon the removal of all diseased bone. The House Surgeon thereupon removed the os calcis, astragalus, cuboid, scaphoid, and cuneiform bones subperiosteally with the periosteum elevator, the os calcis being removed almost in its normal shape; the remaining bones were taken out in small fragments.

The wound was then thoroughly filled with Peru-

vian balsam, so that all parts were covered from the effects of the air; Listerism carried out to perfection, the creosote in the balsam being the antiseptic. It was then filled with oakum, which kept the heel in shape, a flannel blanket was drawn tightly over the whole foot, and the leg firmly encased in a plaster-of-Paris bandage, the foot and leg being held firmly in the normal position. After the bandage was set a fenestra was cut through on either side of the foot and a large wad of oakum placed in either fenestra, a roller bandage was then firmly applied to the whole limb, the plaster casing protecting the limb from pressure, but allowing pressure over the fenestras, while the internal stuffing being made of picked oakum, percolation could take place and no danger of pyæmia or septicæmia was to be feared.

The oakum was removed every day, the amount reapplied being daily diminished as the cavity became filled with osseous matter, until the amount of oakum applied became merely a thread (movement being given daily to the foot). The sinus was completely closed and an almost perfect foot secured, with the exception that the heel did not project to the normal position, but the motions of the foot upon the leg were almost equivalent to a normal joint, and the child walked with scarcely a perceptible limp. The only defect was in the inversion of his toes from want of power in the peroneal muscles to evert the foot. The application of a little elastic band from his shoe opposite to the little toe to the outside of the leg, by giving slight elastic force would guide the foot in the proper direction and enable him to to walk almost normally.

Progress of Medical Science.

The Pathogenesis of Gastric Ulcer.—In the course of some experiments on the production of nephritis by the injection of cantharidin under the skin, Aufrecht (*Allgemeine Med. Central Zeitung*, 1882) has made the remarkable discovery that ulceration of the stomach may result from these injections. After the subcutaneous injection of cantharidin, suspended in oil to lessen the local irritation, he found in guinea-pigs a large number of circumscribed changes in the mucous membrane of the stomach. These were at first regarded as merely hemorrhages, but on closer examination were found to be spots of loss of substance, the boundary of which projected above the level of the adjacent mucous membrane. These changes were especially conspicuous in the stomach of a rabbit which died ten days after the injection of two and a half milligrammes of cantharidin. About fifteen small ulcers were found in the stomach, many of them with raised edges, and all filled with blood clot. There were also six circular spots of a dull gray color, sharply limited, without any extravasation. A microscopical examination showed in the latter the following changes: The epithelium of the glands was paler and less granular than normal; between the glands was a clear amorphous material; the capillaries were distended with blood, whereas elsewhere they were empty. A similar change was found in the vicinity of the extravasation, and the glandular epithelium here presented irregularity. The extravasations were of uniform brownish red blood, in which no intact blood-corpuscles could be seen. There was no sharp limitation to the blood effused, such as might have been expected had the hemorrhage resulted from the rupture of one vessel. From these facts he concludes that the extravasation is the second stage in the process, consecutive to inflammation, which appears to be the first alteration. Aufrecht believes that these facts indicate that in man a similar sequence may obtain, and that ulcers of the stomach probably commence as inflammation, and not, as is commonly assumed, by hemorrhage.

Spasmodic Stricture of the Œsophagus.—At a meeting of the New York Medical and Surgical Society, Dr. Francis Delafield narrated a case as follows: The patient was an unmarried woman twenty-three years of age. He saw her first on February 16, 1882, when she stated that she had always enjoyed good health until eighteen months before. At that time she began to suffer from attacks of severe pain, which was referred to the region of the lower end of the œsophagus. These attacks occurred about once a week, lasted ten or fifteen minutes, and had no relation to the taking of food. They sometimes occurred in the night, sometimes in the day. There were no other symptoms whatever. After three months she experienced difficulty in swallowing solids, and subsequently in swallowing liquids. At length she could take no solid food, and liquids could be swallowed only at times. On some days she could swallow nothing whatever. She starved to a certain extent, but had no other symptoms. Menstruation continued regular, and there were no neurotic symptoms. Dr. Delafield was able to pass a large œsophageal tube into the stomach, and he therefore supposed the case was one of spasmodic stricture of the œsophagus, and at first attempted to treat it by passing the bougie every day, under which she seemed to improve for a time only. On some days she could swallow fluids, but oftener she could not, and as she gained nothing in weight, she was taught how to introduce half a pint of milk and a half pint of cream, mixed, into the stomach through the stomach-tube, to be repeated once a day. Besides, she was to try to eat regularly. She had done this since the 9th of March, and during all this time had been able to eat solid food at any time in the day, but it was her custom to eat an ordinary meal for breakfast and dinner, and to take the milk and cream in the manner indicated in the evening. From her normal weight of 125 pounds she had fallen to 99 pounds, but after adopting this plan she had gained 14 pounds. It was probable, however, that, like some cases of spasmodic stricture which had been reported, this one would continue for a long time.—*The New York Medical Journal and Obstetrical Review*, October, 1882.

Puerperal, Joint, and Bone Diseases.—Dr. Fasola draws the following conclusions from a study of ten cases of joint and bone disease in the puerperal state, observed by himself and others. 1. These diseases may appear in an otherwise normal puerperal state. 2. The joint affections are sometimes acute, sometimes chronic in their course, and may be suppurative or fungous in character. Diseases of the bone may be confined to the epiphysis or attack the entire bone, and may likewise be either suppurative or fungous. 3. Puerperal arthritis and osteomyelitis differ from the similar diseases in the non-puerperal state in their mode of onset, their course, and their results. 4. These diseases are always to be regarded as septic processes even when

they run a subacute course without fever. Prophylaxis consists in the employment of antiseptic measures during childbirth. The treatment of these diseases should be conducted according to the ordinary principles of medicine and surgery.—*Centralblatt für Gynäkologie*, September 23, 1882.

SPONTANEOUS DISCHARGE OF AN HEPATIC ABSCESS INTO THE BRONCHI.—Dr. Menacho relates the following case: A woman, sixty years of age, though living in a marshy district, had never had malarial fever. There was no enlargement of the spleen. Without any marked hepatitis there was developed an abscess of the liver, characterized by a tumor easily distinguished on palpation. For several days she suffered from difficult respiration, which only subsided after the expectoration of a considerable quantity of pus. This discharge of pus through the bronchi continued for about six weeks and was accompanied by a subsidence of the tumor, the liver dulness returning to its normal limits.—*Journal de Médecine et Chirurgie*, October, 1882.

A TRACHEAL SPECULUM.—Dr. E. Braatz describes in the *Centralblatt für Chirurgie*, September 23, 1882, an instrument to be used in place of the ordinary tube after tracheotomy. It consists of two narrow but strong blades, fastened, one on each side, to a ring, which may be attached to a shield in the ordinary manner. The blades are given the usual curve of a tracheotomy tube. The author was led to devise this instrument from the difficulty experienced in removing a large piece of false membrane through a canula. He claims for it that it offers less obstruction to the passage of false membrane, and permits of a thorough inspection of the trachea and under surface of the larynx. Through it, also, local applications may be made to any portion of the trachea.

PERIODICAL SORE THROAT RECURRING AT EACH MENSTRUAL EPOCH.—Dr. Genet (*Journal de Médicine et Chirurgie*, October, 1882) describes a sore throat which makes its appearance with great regularity a few days before each menstrual period, and subsides upon the appearance of the catamenial flow. It is characterized by a slight sensation of dryness in the throat, with thirst, and a little tickling cough. There is neither fever, headache, foul breath, nor any actual pain in the throat. Examination shows a slight redness of the fauces, and a little swelling of the tonsils. The affection lasts two or three days and disappears immediately upon the establishment of the menstrual flow. At the menopause, when the courses become irregular, the sore throat ceases to appear every month, but is observed only before the catamenia, at whatever time the flow may occur.

DILATATION AS A CAUSE OF CARDIAC HÆMIC MURMURS.—Dr. George W. Balfour has been led to adopt the theory of dilatation of the heart, as a cause of all cardiac chlorotic murmurs through the following considerations:

1. *This theory is alone capable of explaining in a rational manner all the discrepancies in the prevalent theories of these murmurs.* The aortic orifice has been most frequently mentioned as the seat of the hæmic murmur. But, although it is a basic murmur, it cannot be located at the aortic valve, since at its first appearance it is not propagated along the aorta or into the carotids. Neither can it be at the pulmonary orifice, for though its position of maximum intensity is in the neighborhood of the pulmonary artery, yet there are no causes for a murmur here that are not equally operative at the aortic opening. It has been referred by some writers to the mitral or to the tricuspid valve, but the universally recognized basic position of the primary hæmic murmur excludes this theory. Thus the position of this sound has been referred in turn to each of the four cardiac orifices. The only explanation of such a discrepancy is that the hæmic murmur is one which may be audible in all the positions described.

2. *It is thoroughly consistent with the results obtained by experiment.* When Marshall Hall was investigating the effects of loss of blood upon the system he observed that in the reaction subsequent to such loss the heart's action was "accompanied by a peculiar noise resembling that of the saw or of the file." He recognized also the identity of this sound with the chlorotic murmur. Beau determined the fact that the murmurs following loss of blood resulted, not from the primary anæmia, but from the secondary spanæmia, a condition to which he gave the name of "serous polyæmia." He also found that this condition of the blood was invariably associated with a dilated and hypertrophied heart.

3. *This theory is perfectly consonant with clinical experience.* It is known that in chlorosis a similar condition of the heart exists to that found in the "serous polyæmia" produced by repeated bloodlettings—dilatation and hypertrophy. The chlorotic murmurs are not due to anæmia, but to spanæmia, a condition in which the blood is not diminished in amount, though its nutritive and oxygenating properties are greatly lessened. The primary murmur in such cases is the venous num depending upon abnormal friction between the spanæmic blood and the venous walls. The next phenomenon observed is an accentuation of the pulmonary second sound due to increased intrapulmonary blood-pressure, the only possible cause for this being obstruction to the onward flow of blood. This latter, in a disease such as chlorœsis, can only be due to a loss of tone and contractile force in the cardiac muscle. Less able to do its work, yet having no less work to do, the heart slowly dilates and at the same time slowly hypertrophies. As the heart dilates, the mitral and tricuspid valves become incompetent and give rise to murmurs. The regurgitation in the tricuspid causes pulsations in the jugular veins, and the abnormally large ventricular blood-waves give rise to systolic murmurs in the pulmonary and aortic areas. These murmurs are propagated along the carotids, and may be heard on the slightest compression in every artery in the body. Thus we have murmurs in every area of the heart in advanced chlorosis. The primary cardiac hæmic murmur is basic, is not propagated in any special direction, but radiates around the pulmonary area. On careful examination its position of maximum intensity is found to be in the second interspace, from one to two inches to the left of the sternum. In this position the author states that he has always detected pulsation —at least during expiration. Occasionally this pulsation is so marked as to form a tumor, and has even been mistaken for an aneurism. Now, dulness and pulsation in this region are signs of dilatation of the left auricle; hence the author concludes that this murmur is propagated outward from the dilated appendix of the left auricle. This view receives further confirmation from a comparison of the primary chlorotic murmur with the similar murmur sometimes heard in mitral stenosis, which has

been shown by Naunyn to be due to mitral regurgitation. The tense auricular wall is thrown into sonorous vibrations by the impinging blood-streams, the sound being conveyed to the chest-wall by the auricular appendix which lies in contact with it at the base of the heart. Since these two murmurs are similar in character and position, it is fair to assume that they arise under similar conditions.—*British Medical Journal*, August 26, 1882.

Elastic Tension and Articular Motion as Therapeutic Agents in the Treatment of Pott's Disease.—Dr. M. Josiah Roberts criticises the want of uniformity in the principles of the treatment of Pott's disease as advocated by Sayre. In the lower dorsal and lumbar regions the attempt is made to secure rigid extension and absolute rest of the diseased parts, while in the cervical region the means employed afford elastic extension and a limited degree of motion. From his study of the subject the author concludes that the rational treatment of cervical caries (and incidentally of disease of other portions of the spinal column) is by elastic extension, permitting of limited voluntary articular motion. He claims that by this method the carious vertebræ are relieved of undue pressure, reflex spasm is overcome, and the jar incident to walking or riding is reduced to a minimum. As a consequence of the limited motion, without irritation, allowed to the diseased spine, the flow of blood through the capillaries is facilitated, and the nutrition and repair of the diseased tissues are promoted.—*New York Medical Journal and Obstetrical Review*, October, 1882.

Boracic Acid in the Treatment of Furuncle.—Dr. Gourgnes claims speedy and excellent results in the treatment of boils by boracic acid. He employs an ointment of 4 grammes boracic acid in 20 grammes vaseline with ½ gramme benzoic acid. The boracic acid should be finely powdered and not dissolved in alcohol or glycerine. This ointment continuously applied relieves the pain promptly and causes the disappearance of the furuncle in three or four days. *Journal de Médecine de Paris*, September 22, 1882.

Peritonitis caused by Vaginal Injections.—Dr. Mascarel reports a case of peritonits following the employment of the vaginal douche at a thermo-mineral bath. The tube employed was of large size, with a single opening at its extremity, and the fluid was injected with considerable force. Subsequent examination showed that the uterus was prolapsed and the os widely patent. The author insists upon the danger of medicated douches in women who have borne children, and urges in any case the employment of a tube with a bulbous extremity, perforated with a number of small holes.—*Journal de Médecine de Paris*, September 22, 1882.

Possibility of the Easy and Painless Introduction of a Tube into the Larynx.—Dr. Brown-Séquard in a communication addressed to the Académie des Sciences, relates some experiments undertaken by him, with the view of facilitating the introduction of a tube or other instrument through the rima glottidis. The pharynx was opened by an incision extending from the angle of the jaw to the base of the tongue, exposing the epiglottis and larynx. A very rapid current of carbonic acid gas was then projected over these parts, and at the expiration of from fifteen seconds to two or three minutes it was found possible to introduce a tube, or even the finger, into the larynx without giving rise to pain or any irritation. This local anæsthesia (accompanied by incomplete general anæsthesia) disappeared in from two to eight minutes after the withholding of the gas. No local or general bad effects followed the experiments. At first an extreme irritation of the larynx is produced by the carbonic acid, which soon, however, passes away and is succeeded by complete local anæsthesia. The vapor of chloroform produces like effects. The experiments were made upon dogs and rabbits. The author promises soon to determine the feasibility of the application in the human subject.—*La France Médicale*, October 3, 1882.

Contraction of the Vessels in a Limb remaining after Amputation.—Dr. Paul Segond, in a study of the changes occurring in the vessels of a limb from which a portion has been removed by amputation, arrives at the following conclusions: After an amputation, the arteries and veins of the affected limb undergo a notable diminution in size. This is observed even where the member removed is but a small part of the entire limb, as in hand or foot amputations. The reduction of the blood supply takes place, not only in the stump, but in the whole extremity. The diminution in the calibre of the vessels follows immediately upon the amputation and is not consecutive to the atrophy of the soft parts. It may indeed play an important role in the pathogenesis of this atrophy.—*Revue de Chirurgie*, August and September, 1882.

Deafness following Mumps.—Dr. Johannes Seitz reports a case of deafness following an attack of parotiditis, but five other cases having been hitherto recorded. The patient, a student nineteen years of age, was seized with inflammation of both parotid glands, of considerable intensity, but unaccompanied with any cerebral symptoms. On the sixth day the patient seemed well. Two days later he returned, complaining of deafness on the right side with tinnitus aurium and dizziness. The watch could be heard only when in contact with the head. The drum of the right ear was thinned, opaque, and slightly sunken, yet the light pyramid appeared normal. On the left side there were evidences of old middle-ear catarrh, but no signs of recent inflammation. There was no complaint of the left ear except for a day or two, when a sound like the roaring of the wind was present. This soon subsided and no further trouble was experienced on this side. The dizziness and tinnitus continued for two or three weeks and then gradually ceased, but the loss of hearing on the right side remained permanent.—*Correspondenz-Blatt für Schweizer Aerzte*, October 1, 1882.

Tabes Dorsalis in Early Childhood.—Dr. G. Leubuscher, in the *Berliner Klin. Wochenschrift*, September 25, 1882, reports the following case of locomotor ataxy, occurring in a child only three and a half years old. The patient was brought to the Jena Policlinic by his parents, who stated that for six weeks past the child had been unable to walk. He had always been a healthy boy, though he stuttered. There was no history of nervous diseases or of syphilis in the family. The boy complained of no pain, there was no strabismus and no disturbance in the functions of the bladder or rectum. Intelligence was unimpaired. The legs could be raised from the table, flexed and extended. Tendon reflex, and foot clonus absent, skin reflexes normal. The patient was unable to stand or walk alone, and when assisted by the hand, exhibited a typical ataxic gait. There was also commencing ataxia of the upper extremities. Slight improvement seemed to follow galvanization with a mild ascending current.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, November 18, 1882.

HERBERT SPENCER ON AMERICA.

In a recent London address, Mr. Matthew Arnold said that if he were asked to name the chief defects in the three leading nations of Europe, he would say that the French lacked morality, the Germans civic courage, and the English lucidity, *i.e.*, a capacity for judging things intelligently and without prejudice. Mr. Herbert Spencer, in his farewell speech last week in this city, supplemented these international criticisms and asserted that the fault of Americans was their passion for work, their persistent unrelaxing business activity.

He said: "Everywhere I have been struck with the number of faces which told in strong lines of the burdens that had to be borne. I have been struck, too, with the large proportion of gray-haired men; and inquiries have brought out the fact that with you the hair commonly begins to turn some ten years earlier than with us. Moreover, in every circle I have met men who have themselves suffered from nervous collapse due to stress of business, or named friends who had either killed themselves by overwork, or had been permanently incapacitated, or had wasted long periods in endeavors to recover health. I do but echo the opinion of all observant persons I have spoken to, that immense injury is being done by this high-pressure life—the physique is being undermined."

This exclusive devotion to work ends in a way every one knows. The individual finds that toil has become a necessity; not that he entirely enjoys his continual labor, but he is uneasy or unhappy without it. By and by, when relaxation and recreation are made necessary by undermined health, no enjoyment is gotten from them. The capacity for being amused may be starved out as well as destroyed by satiety.

Still further, the evil does not end in this generation. The health is injured.

"Damaged constitutions reappear in children, and entail on them far more of ill than great fortunes yield them of good. When life has been duly rationalized by science, it will be seen that among a man's duties care of the body is imperative, not only out of regard for personal welfare, but also out of regard for descendants. His constitution will be considered as an entailed estate, which he ought to pass on uninjured, if not improved, to those who follow; and it will be held that millions bequeathed by him will not compensate for feeble health, and decreased ability to enjoy life."

Mr. Spencer has much to say about the "complete" or ideal life. It is one in which neither knowledge, nor work, nor moral aspiration, nor indulgence is the leading *motive* of existence. But all these things are secondary, are to help us in the great aim of life—right living.

To the medical man Mr. Spencer's remarks have a special interest and pertinence. He has formulated what we all have known and perhaps spoken, but they come with especial force from one who is so profound a thinker and philosopher.

The doctor is an example of the persistent worker, and of one who, with rare exceptions, becomes finally the victim of his work. At the age of fifty most physicians are in a harness out of which they feel restless and useless. Life is no longer made for them, but they for a certain kind of life.

To the medical profession, then, our English philosopher preaches weightily the gospel of living, of getting more sweetness out of existence, and less of the sourness that comes with persistent toil in narrow routines of thought and activity.

Our practical readers will at once say that it is easy for well-fed philosophers to preach of sweetness and light, of relaxation and amusement. We must keep our patients, pay our bills, support our families. It is true that Mr. Spencer's "complete life" is quite unattainable for most of us just now. Our country is young, there is too much to do, we have fierce competitors to meet. Nevertheless, it will be wise to bear in mind that there is a higher philosophy of living. And it will be found that often one can get nearer to it than he had ever thought.

AUXILIARY HOSPITAL SATURDAY AND SUNDAY ASSOCIATIONS.

As the time approaches for the annual hospital Saturday and Sunday collections, we are glad to notice any movement calculated to further still more the charitable care of the sick poor. Notwithstanding the liberality which has characterized donations to the yearly hospital fund, it has been quite apparent to those interested in the movement that something more than a mere trust in impulsive alms-giving must be done to secure the grand end in view. Accordingly, managers of the hospital associations have, wisely we think, determined to form auxiliary associations in the different departments of trade

from which subscriptions can be systematically received. In return for such contributions it is intended that members of the auxiliary societies shall, on a provident system plan, be entitled to admission and treatment in any of the hospitals comprised in the parent association, at the rate of the care of one patient a day for every dollar contributed. In the hospitals for the treatment of children, at the same rate for every seventy-five cents thus accumulated, and in the hospitals for the treatment of diseases of the throat, eye, and ear, at the rate of the care of one patient per day for every one dollar and twenty-five cents thus subscribed.

It is provided, however, that each hospital shall be required to keep patients from auxiliary associations for such number of days only as it shall be compensated for, at the rates above allowed for patients, by the whole amount it shall receive from the annual collection; that no auxiliary association shall be entitled to keep patients, in any hospital, for a greater number of days than the hospital shall be compensated for, at the rates above specified, by such part of the whole amount received by it, in the annual distribution, as shall be in the proportion of the amount contributed by the Auxiliary Association, in the annual collection, to the whole amount collected, other than amounts specially designated; and that all rights and obligations under this resolution shall be limited to the year commencing on the 1st day of January next after the annual collection.

The plan of organization is a good one, and there is no doubt it will give satisfaction to all concerned. A more effective and simpler one could hardly be conceived. We are pleased to learn that it is beginning to be adopted by some leading trade concerns with a view to the care of the sick poor among their employés. Such medical men as may be interested in similar organizations elsewhere may address Rev. G. S. Baker, Superintendent of St. Luke's Hospital, New York, for any desired information regarding details. It is fair to say in this connection that Mr. Baker's untiring efforts in the direction of systematizing and making practical the movement in question cannot be too highly appreciated.

CHANGES OF ELECTRICAL RESISTANCE IN FUNCTIONAL NERVOUS DISEASES.

THE physical or chemical changes that take place in functional disturbances of the nerves and nerve-centres have generally been considered quite without the pale of any known method of analysis. That some peculiar physical changes do take place, however, is of course admitted, and the fact has recently been demonstrated in a very interesting manner.

Dr. A. Estorac, interne of the Montpellier Hospital, tested the resistance of the tissues to electrical currents in healthy persons, and then in patients suffering from hemianæsthesia and hemihyperæsthesia. It is well known that when galvanic currents are directed through any part of the body, there is usually a higher resistance at first, which resistance gradually diminishes with the continuance of the stream. In different persons, and in different parts of the same person, there are slight variations in the amount of resistance. In the same parts, or in symmetrical parts of the same individual, however, the resistance is practically always of equal amount.

M. Estorac found that in hysterical hemianæsthetic patients, there was a greater resistance upon the diseased than upon the healthy side. This resistance, in some cases, disappeared after prolonged applications; in other cases it continued. On the other hand, there was a less resistance upon the hyperæsthetic side than upon the normal one. This was true even when the hyperæsthesia had taken the place of a previous anæsthesia.

It is always laid down in electro-therapeutical manuals that the conductability of the body is due to that of the saline solutions contained in it. M. Estorac's experiments would lead to the inference that there are, in addition, some other factors in the matter which control, at least, the finer changes in conductibility. Whether these are simply slight changes in vascular supply, or are something yet more intangible, cannot yet be determined.

The experiments referred to are in harmony with some previous observations by Vigouroux. They may lead to further practical applications of electricity in electro-diagnosis. Thus, in alleged hypnotic conditions, local anæsthesia or hyperæsthesia can be readily produced. It is possible that the test of current resistance may be used here.

COLLEGE-BRED MEN IN MEDICAL SCHOOLS.

IN an editorial upon the "American Medical Student," published last winter, we gave some approximate estimates of the per cent. of college-bred men among this class. These figures were based upon returns obtained by the Commissioner of Education. It was asserted recently by our correspondent, Dr. Tyson, that they did not accurately represent the per cent. of students who had received degrees in letters or science in the Pennsylvania Medical colleges, because the Jefferson Medical College had failed to give any returns. Assuming that it has as large a number of baccalaurei as the University of Pennsylvania the proportion for the State would be raised to about sixteen per cent.

As regards the per cent. for the State of New York, our correspondent was in error in his attempt at correction. The last report of the Commissioner of Education shows that there were in the regular medical schools of this State in 1880, 2,037 students. Of these, 237 were reported to have received degrees in letters or science. This gives a ratio of about eleven

per cent., or of about seventeen per cent. among the 1,309 students of the colleges which reported. Three colleges did not report, and it is very safe to assume in such cases that their per cents. are low.

With regard to other States, the recent statistics give a per cent. for Illinois which does not vary much from that stated by us, and, in general, the facts and conclusions which we first gave were quite correct, as our correspondent would have found by more extended investigation.

The Boston *Medical and Surgical Journal* has recently published some interesting statistics showing the gradual changes in the proportion of college-bred men in the professional schools of Harvard University during the last five years. Thus the per cent. of baccalaurei in the medical school for the year 1881–2 was 50.65, while five years ago it was only 42.94 per cent.

The figures show also that the ratio is steadily increasing in the medical school at a greater rate than in the law-school, while in the divinity school the per cent. is actually decreasing, being about 40 now against 61 five years ago.

A PROSPECTIVE ATTACK ON THE BACILLUS OF TUBERCULOSIS.

THE editors of the *Chicago Medical Journal and Examiner* announce that they will shortly publish an article by Dr. H. D. Schmidt, of New Orleans, which article will contain very strong evidence, if not actual proof, that the *bacillus tuberculosis* is not an organized body, but a fat crystal. Dr. Schmidt began a series of studies upon the subject of tubercle a year ago. When Koch's discovery was announced he tried to find the new organisms, following strictly Koch's directions. Like others, he was unsuccessful, although he states that in some specimens of sputa certain bodies became visible, having a faint bluish color and presenting something of the shape and size of the bacillus. Still, it was impossible to say that these were organized bodies. He then used the caustic potash method adopted by Baumgarten, the sections being soaked in a thirty per cent. solution. In this way the presence was established in tuberculous tissue and sputa of minute rods which in every respect corresponded to the description given of Koch's bacilli.

In close connection, however, with these minute bodies, there were almost always droplets of fat. The idea was suggested that the bacilli might be only crystals, such, for example, as had already been seen in the degenerating fat-cells of leprous tissue. This idea was strengthened by finding that potash sections of various tissues in which there was fatty degeneration developed fine crystals in a short time, even after they had been mounted. We are told that Dr. Schmidt, pursuing his theory further, now claims that every form of Koch's bacillus can be artificially produced. He does not succeed in staining them, however, although they are highly refractive and have a faint bluish color, which may have deceived some observers.

By Ehrlich's and by Gibbes's method the supposed organisms were demonstrated, but not in a stained condition. In tuberculous tissue the rods were by no means found to correspond with each other in the matter of form and size. They were generally recognizable in those elements of the tubercular mass which had undergone degeneration.

Dr. Schmidt has a high reputation for microscopic skill, and his views will be examined with much interest. By a coincidence, one of the best microscopists in this city has, we are told, expressed opinions similar to those of Dr. Schmidt.

It is, of course, difficult to suppose that a discovery which has been confirmed quite widely and by a considerable number of skilled observers, should prove to be a mistake after all.

Furthermore, the fall of the *bacillus* of tuberculosis would involve that of a number of other infectious organisms. There will be very strenuous opposition, therefore, to the fat-crystal theory.

PROFESSOR BILLROTH'S AMPUTATIONS.

DR. ANTON WÖLFLER, Docent for Surgery and one of Billroth's assistants, has written a small work giving an account of the larger amputations in Billroth's clinic during the years 1877–1880.

There were, during these three years, 91 of the larger operations performed. In the previous nine years there had been 146 amputations. The increase was to some extent due to an increased ratio in the number of operations for bone and joint diseases. Of these 91 amputations 70 were healed, 3 were not healed, and 18 died, being a mortality of 19.7 per cent. This is a low rate, especially if contrasted with that of Billroth's former nine years' work when the per cent. of deaths was 45—a rate rarely exceeded, except in Zurich and Paris. The average mortality-rate in English cottage-hospitals, as stated by Mr. Burdett, is a little over 17 per cent. The average in German hospitals during the last few years has been only 15.6 per cent., according to Wölfler. Professor Billroth's ratio is thus above the average, but he undoubtedly had a severer class of cases. The remarkable improvement during late years in the results of large amputations is, of course, attributed to the introduction of antiseptics. If surgery is inclined to be boastful of what it accomplishes now, a useful antidote to its pride is furnished in reflections upon the number of lives lost through ignorance in years gone by. For seventeen years Germany's greatest surgeon lost nearly one-half his amputations; now it appears that he need only have lost one-sixth. The effect of antisepsis is especially shown in Billroth's record of amputations where

there were no complications, meaning especially thereby, no septic infection. This record is as follows: Zurich, 1860–67, mortality 35.1 per cent.; Vienna, 1868–76, 29.5 per cent.; Vienna, 1877–80 (careful antisepsis), 5.7 per cent.

Dr. Wölfler draws some conclusions regarding the relative dangers of traumatic and pathological amputations. That amputations for injuries are more fatal as a whole is admitted, but with some modifications. "A traumatic amputation," he says, "in and of itself is not more dangerous than an amputation for disease. It is the septic infection which causes the bad results. The mortality ratio is much lower in the first week for traumatic than for pathological amputations. After the first week, however, this relation is gradually reversed.

The effect of antisepsis in complicated or infected cases is strikingly shown. In the years 1877–80, 9 of these amputations proved fatal; in 1871–76, among 14 complicated cases the deaths were 12; in 1860–76, among 69 cases the deaths were 55!

In the last three years such complications as osteomyelitis, erysipelas, phlegmons, and phlebitis, were never present—a fact which means that such accidents are now almost inexcusable in modern surgery. Four times among twelve cases where reunion did not take place, reamputation was necessary.

On the other hand, there were quite frequently found small, circumscribed, superficial areas of gangrene. These have been met with and noticed by other surgeons using antiseptics and tight dressings. Wölfler ascribes them to the use of Esmarch's bandage, to carbolic acid, and the compression of the wound dressings.

Health of Criminal Women.—Dr. E. M. Mosher, in an article upon this subject (*Boston Medical and Surgical Journal*), comes to the following conclusions:

First.—Intemperance and unchastity are the two vices which fill our penal institutions with women.

Second.—The influence of these vices is detrimental to health of body, increasing its susceptibility to disease, and lessening its recuperative power.

Third.—The diseases which follow as a direct result of these vices are syphilis, alcoholism, dyspepsia, rheumatism, and general anæmia.

Fourth.—Morbid conditions of body react upon the moral nature, increasing and perpetuating the tendency to criminality; hence the importance of careful medical supervision as a reformatory measure.

Fifth.—More ample provisions should be made in all large cities for the isolation and thorough treatment of venereal patients of *both sexes*, either by the addition of special wards to the general hospitals or by the establishment of hospitals for this class.

Sixth.—The women who commit high crimes, that is, larceny, burglary, arson, manslaughter, etc., possess a more sensitive nervous organization than those who commit only offenses against chastity and public order.

Reviews and Notices of Books.

A Practical Laboratory Course in Medical Chemistry. By John C. Draper, M.D., LL.D., Professor of Chemistry in the Medical Department of the University of New York, etc. New York: William Wood & Co. 1882.

In this little work of only sixty pages Dr. Draper has managed to write a very serviceable, because eminently practical, guide-book to the student who is pursuing a laboratory course in medical chemistry. The working practitioner also will find it useful to refresh his memory by a perusal of its pages. Both student and physician scarcely require more than the knowledge it conveys for a satisfactory and reliable performance of those every-day tests which they must needs perform in the pursuit of studies on the one hand and the exercise of a calling on the other.

On Asthma: Its Pathology and Treatment. By Henry H. Salter, M.D., F.R.S. First American from the last English Edition. New York: William Wood & Co. 1882.

Salter's treatise on Asthma forms the September number of Wood's Library. In all that relates to the clinical history of this affection, and also as regards its etiology, consequences, and prognosis, no better work has been published in the English language than Salter's. The various existing theories, regarding the phenomena of the disease, are also analyzed and dealt with by the author from the standpoints of fact and experience. The chapters on treatment are most comprehensive. The several depressants, stimulants, sedatives, and antispasmodics, their mode of action and relative value, are fully discussed and supported by the citation of numerous cases. Diet and hygiene and the influence of locality also receive their due weight and consideration, with illustrative histories. In addition, there are special appendices, A and B, given respectively to clinical and to tabulated cases.

Hygienic and Sanitative Measures for Chronic Catarrhal Inflammation of the Nose, Throat, and Ears. By Thomas F. Rumbold, M.D., Professor of the Diseases of the Nose, Throat, and Ears in the College for Medical Practitioners of St. Louis, etc. Second Edition. Medical Journal Publishing Co. 1882.

The present edition of this practical little treatise will be read with interest and profit by the practising physician. It contains some new matter, although scarcely any new therapeutic suggestions. The author again forcibly points out the advantage, or, as he calls it, the necessity of proper hygienic and sanitative measures, in treating the troublesome catarrhal conditions of the parts mentioned in the title. If Rumbold's faith in such measures seems somewhat excessive, the fact nevertheless remains that these adjuvants to rational treatment are too often neglected by the general practitioner. A perusal of the author's views cannot fail, therefore, to lead to a more successful management of chronic catarrh by that large class of physicians who, without being specialists, are yet frequently called upon to treat this obstinate affection.

A Treatise on Therapeutics, Comprising Materia Medica and Toxicology, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, Jr., M.D., Professor of Materia Medica and Therapeutics in the University of Pennsylvania, etc. Fourth Edition. Philadelphia: J. B. Lippincott & Co. 1882.

For those who wish to study rational therapeutics based on scientific principles, without disregard of the great practical aids supplied by careful empiricism, Wood's treatise will be a welcome, nay, an indispensable volume. It is a book which stands alone in its special sphere. It is not encumbered with the confusing optimism of Bartholow's popular manual, while on the other hand it does not breathe the chilling nihilism of some German works on therapeutics. The student who wishes to copy and utilize ready-made prescriptions for book-cases of disease will search in vain in the work before us. But he who wishes to learn what painstaking observation has taught us in regard to the action of various drugs in health and disease, will be amply gratified. A mastery of this knowledge will make the self-reliant practitioner who extemporizes his prescriptions to meet the wants of individual cases, and who has no need of burdening his memories with the formulas recommended by "authorities" in the various departments of the healing art. The present fourth edition has taken due cognizance of the advances made since the publication of the third issue. The chapter on electricity is too meagre in details to prove satisfactory. In future editions it should be materially amplified, or else entirely omitted. Wood's "Therapeutics" is earnestly recommended to the student and the aspirant for success in practice.

The Treatment of Diseases by the Hypodermic Method. By Roberts Bartholow, M.A., M.D., LL.D. Fourth Edition. Philadelphia: J. B. Lippincott & Co. 1882.

The present edition of Bartholow's manual of Hypodermic Medication has been revised and enlarged in such a way as to do most complete justice to the progress made in this department of therapeutics since the issue of the preceding edition. Nevertheless, the work is neither complete nor perfect. There are some omissions and several blemishes in the make up of the volume which, it is to be hoped, will be supplied and rectified in future editions. Among the former the hypodermic employment of pilocarpine in various throat affections, notably in diphtheria, might certainly have been noticed. Resorcin has been found useful in the hands of several European observers, and deserves mention in a modern hand-book purporting to be as complete as the treatise of Bartholow. Nitrite of amyl has been used hypodermically with signal benefit in impending syncope, as well in chloroform narcosis as from other causes. The principal blemish which we wish to point out is the undue prominence given to polemical reasonings concerning antagonism of various drugs. Certainly, Dr. Bartholow, of all persons in the profession, is perhaps the best qualified to discourse on this interesting topic. Nevertheless, in a work of the kind before us, it is hardly necessary to present these problems with such fulness, not to say self-complacency. In spite of these minor faults, which the reviewer feels called upon to point out, the book is by all means the best and most handy of its kind, and will be profitably consulted both by students and practitioners.

A System of Surgery, Pathological, Diagnostic, Therapeutic, and Operative. By Samuel D. Gross, M.D., LL.D., D.C.L. (Oxon.), LL.D. (Cantab.). Sixth Edition. 2 vols. 8vo, pp. 2,368. Philadelphia: Henry C. Lea's Son & Co. 1882.

The sixth edition of this work comes to us bearing evidence of very thorough revision. It is rarely the lot of an author to have a treatise so long before the profession—nearly a quarter of a century—and be privileged at the end of that period to go over his task afresh and maintain the high standard of previous efforts. But more fortunate still is it for his readers that such a thing is possible, and that the ripe experience of the writer is so satisfactorily brought down to the present date. The work, as a whole, needs no commendation. Many years ago it earned for itself the enviable reputation of the leading American work on surgery, and it is still capable of maintaining that standard. The reason for this need only to be mentioned to be appreciated. The author has always been calm and judicious in his statements, has based his conclusions on much study and personal experience, has been able to grasp his subject in its entirety, and, above all, has conscientiously adhered to truth and fact, weighing the evidence pro or con accordingly. And all this is done consistently with an independence of opinion regarding points of practice. In fact, he has stamped his individuality on every page, and has not left the student in doubt as to any given course to pursue. But these are only general considerations which may serve as preface to what may be said of the work in this last edition. A considerable amount of new material has been introduced, and altogether the distinguished author has reason to be satisfied that he has placed the work fully abreast of the existing state of our knowledge. In so doing he has availed himself of the assistance of his talented son, Professor S. W. Gross, who has much enriched the subject of morbid growths by personal contributions thereto. Recognizing the benefits of specialism in the study of surgery in its broadest sense, the author has wisely given the supervision of some parts of the work to experts in different branches. Hence we learn that Dr. J. Solis Cohen has revised the chapter on respiratory organs, Dr. George C. Harlan that on the eye, and Dr. Charles H. Burnett that on the ear. The chapter on refraction and accommodation by Dr. W. Thomson is retained from the fifth edition. Dr. E. C. Seguin furnishes an interesting and instructive section on cranio-cerebral topography. Dr. Battay supplies the material for the discussion of oöphorectomy, and Dr. L. H. Sayre discourses on the treatment of spinal diseases. The work is copiously illustrated as usual, and altogether contains sixteen hundred engravings.

The Principles and Practice of Surgery. By John Ashhurst, Jr., M.D., Professor Clinical Surgery in University of Pennsylvania, etc. Third Edition. 8vo, pp. 1,064. Philadelphia: H. C. Lea's Son & Co. 1882.

Within a short period of time Ashhurst's Surgery has advanced to a third edition. This is generally a very fair indication that the author has written a good book. In this particular instance the verdict is rightly rendered. The author, long known as a thorough student of surgery, and one of the most accomplished scholars in the country, aims to give in this work "a condensed but comprehensive description of the modes of practice now generally employed in the treatment of surgical affections,

with a plain exposition of the principles upon which these modes of practice are based." In this he has so well succeeded that it will be a surprise to the reader to know how much practical knowledge extending over such a wide range of research is so well compressed in a volume of this size. This feature of the work must be its best claim for continued popularity with students and practitioners. In fact, in this respect it is without any equal in any language. In the present edition many novelties in surgical practice are introduced, many modifications of previous statements made, and several new illustrations added.

MEDICAL ELECTRICITY. By ROBERTS BARTHOLOW, A.M., M.D., LL.D. Philadelphia: Henry C. Lea's Son & Co. 1882.

THE second edition of this work following so soon upon the first, would in itself appear to be a sufficient announcement; nevertheless, the text has been so considerably revised and condensed, and so much enlarged by the addition of new matter, that we cannot fail to recognize a vast improvement upon the former work. The methods of determining and expressing current strength, tension, resistances, etc., are more fully presented, and the action and uses of the magnet, and the polar method, are also entered into more extensively. It would be impossible, however, for us to mention the work in detail, embracing as it does such an extent of united interest that to touch upon any particular portion minutely, necessarily involves the notice of others equally important.

The first part of the work is devoted to electrophysics, including magnetism, static and dynamical electricity, and their various phenomena and laws, demonstrated by numerous experiments. The various forms of galvanic combinations also receive attention, with special chapters on electro-magnetism and magneto-electricity, and on the various batteries for medical use, their form, management, and manipulation.

Part II. takes up electro-physiology, treating of animal electricity and the action, severally, of the galvanic and of the induced currents on motor, sensory, and mixed nerves; of the effects of both galvanic and faradic currents, direct and indirect, on the sympathetic and vaso-motor systems, on muscle, on the cerebro-spinal axis, and on the pneumogastric nerve and heart. A closing chapter is also given to the action of electricity on the special senses.

Part III. is devoted to electro diagnosis, presenting various methods and exhibiting the nature of reactions to electrical stimulation when the disease is located in the muscles themselves, in the motor nerves supplying the muscles, in the spinal cord, or within the cranium. The diagnostic value of reactions to electrical stimulation of the nerves of the special senses also receives marked attention.

Part IV. is confined to electro-therapeutics. Beginning with the history and the physiological effects of magnetic applications, its therapeutic results are entered into, followed by chapters on static electricity, its appliances and therapy, and on general electro-therapeutics, exhibiting the applications of electricity in cerebral affections, in spasm and cramp, in the various paralyses, in the treatment of pain, in anæsthesia, in the vaso-motor and trophic neuroses, and in certain constitutional and local diseases.

In Part V. electrolysis and the use of electricity in surgery is treated of, together with medical electric lighting and heating, the cautery and laryngoscope. Finally, Part VI. is devoted to thermo-electricity and its medical uses.

The author has prepared his work for students and practitioners; for those who have never acquainted themselves with the subject, or having done so, find that after a time their knowledge needs refreshing. We think he has accomplished his object. The book is neither too scientific, nor too voluminous, but is thoroughly practical, simple, complete, and comprehensible. It is, moreover, replete with numerous illustrations of instruments, appliances, etc., is printed on fine paper, and handsomely bound in cloth.

HOW TO BE WEATHER-WISE: A New View of Our Weather System. With Illustrations. By ISAAC P. NOYES. 12mo, pp. 51. New York: Fowler & Wells.

THIS is a brief and plainly written explanation of the causes of changes in the weather, based upon the system of the United States Signal Service.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 11, 1882.

E. C. SEGUIN, M.D., PRESIDENT, IN THE CHAIR.

DR. HEINEMAN, in behalf of a candidate, presented a specimen of *suppurative hepatitis*.

SCARLET FEVER AND DIPHTHERIA.

DR. J. LEWIS SMITH presented the larynx and trachea from a child that died in the New York Foundling Asylum, at the age of three and a half years. The following is the history, written by the resident physician, Dr. Swift:

The child was well nourished and healthy till September 29th, when he had symptoms of what seemed to be catarrhal croup. The faucial surface was red, but he did not seem seriously ill. On the 30th he was cheerful, but his tongue was coated. On the night of the 30th he breathed well and slept well.

October 1st. — The rash of scarlet fever appeared over the neck, back, chest, arms, and thighs. In the course of the day it extended to the feet; rash profuse, tongue covered with a white fur, fauces of a deep red color, but without pseudo-membrane; axillary temperature, 103°; pulse, 140; slight stridor in breathing and some cough. 4 P.M.: Temperature, 103¼°. The patient is bright and is interested in what is going on around him.

October 2d.—Restless nearly all night, and slept only a few hours. Skin hot and dry; breath foul; lungs clear; has vomited four times to-day; no diarrhœa; throat still very red, but without pseudo-membrane.

October 3d.—Had some sleep during the night; temperature, 103¾°; pulse, 120; is very talkative; fauces much swollen; vomits occasionally; eruption well out over the entire body. 4 P.M.: Temperature, 104¼°; pulse, 128; tongue moist and clean; some discharge from the nares; urine free from albumen, but its quantity somewhat diminished.

October 4th.—Is very sick; profuse discharge

from the nostrils; throat of a deep red color, and a white pseudo-membrane over both tonsils and uvula; glands at angle of jaw much swollen; temperature, 104°; pulse, 140; some stridor in breathing; passes rather more urine than yesterday. 9.30 P.M.: Temperature, 105°; tongue clean.

October 5th.—Croupy again during the night; tonsils and uvula greatly swollen, so that the fauces are almost occluded; profuse discharge from nostrils, thin and acrid; breathes with difficulty, but so far seems to receive enough oxygen; breath not offensive; temperature, 103¾°.

About 1.30 P.M., after being raised to take some milk, sudden asphyxia occurred. His face was black, his eyes protruded, and he voided fæces and urine. Tracheotomy was immediately performed by Dr. Swift, which gave temporary relief. A large amount of pseudo-membrane was expelled through the opening in the trachea.

October 6th, 12.30 A.M.—Breathes again with great difficulty, and face becoming livid, but the canula is not obstructed; attempts to clean out the obstruction in the trachea below the canula fail to give relief; convulsions occurred, followed by death at 3.30 A.M.

At the autopsy Dr. W. P. Northrup, curator, found the following conditions:

Body.—Well nourished, branny desquamation on the trunk; post-mortem lividity back and sides; tracheotomy wound of neck; membrane to be seen in nose.

Brain.—Normal.

Larynx.—Trachea and pharynx coated with pseudo-membrane. Some of the membrane has been removed from trachea below the wound, leaving the denuded surface bright red and smooth. Tonsils covered by deep slough of fetid odor. Membrane can be traced distinctly up into pharynx and naso-pharynx. Membrane also traced down into two to three divisions of bronchi. Below that point the mucous membrane is very red and covered with viscid mucus, with some pus.

Lungs.—Right: Congested; no consolidation. Left: Old adhesions over middle-third of posterior surface. These adhesions cover a definitely circumscribed area of consolidation about the size of a small hen's egg. When cut this shows a honey-combed, discolored, gangrenous condition. This area extends from the root backward and outward to the surface, where the strong adhesions were encountered. At the lip of the lung, and at the apex, are two to three small triangular areas, the size of a bean, deeply congested, or possibly filled with blood from insufflation after tracheotomy (if that is possible). Otherwise the lung seems normal, excepting a moderate congestion.

Liver.—Somewhat enlarged; congested; one and a half pound.

Spleen.—Normal size; rather pale, and three ounces friable.

Kidneys.—Cortical markings rather indistinct; capsule not adherent; six ounces.

Stomach.—Slight catarrh.

Intestines.—Small: Scattered areas of congestion circumscribed and bright red. Large: Solitary follicles swollen, and some apparently ulcerated. Contents, mucus and some watery, yellowish fluid.

Heart.—Normal.

"*Remarks.*—The history of this interesting case, in brief, is this: The child had symptoms of catarrhal croup, from which he was apparently improving when scarlet fever commenced. This continued three or four days, when severe and fatal diphtheria supervened. I need not state to New York physicians, who are in general practice, that the coexistence of these two infectious maladies is very common. It is rare that a child having diphtheria primarily, takes scarlet fever during the progress of the diphtheritic inflammations; but scarlet fever becomes so often complicated by diphtheria after it has continued a few days in localities like New York, where diphtheria is endemic, that the former may be considered one of the causes of the latter. After having observed many epidemics of these two diseases, I am of the opinion that sometimes when both maladies are prevailing together, as large a proportion as one-fourth of the cases of scarlet fever become complicated by diphtheria, greatly augmenting the danger of the case, and perhaps rendering it fatal. When a complication of these two maladies occurs, it is usually about the third or fourth day of scarlet fever when the symptoms become suddenly aggravated. The temperature is higher, the pulse more rapid, and the heat of surface greater. On inspecting the fauces, the pseudo-membrane is already seen forming over the tonsils, and it may appear over a large extent of surface, faucial, nasal, laryngeal, and bronchial, as in the present case.

"The house-physician, who saw and treated this patient through the entire sickness, was inclined to consider it an exceptional case in which diphtheria alone preceded the scarlet fever; but as the croupy symptoms with which the attack began were abating, and no pseudo-membrane appeared till after five days from the commencement, and three or four after the setting in of scarlet fever, the explanation which I have given seems to be more probable; that is, of a catarrhal croup, scarlet fever, and diphtheria.

"According to my observations, it is rare that diphtheria attacks that portion of the air-passages below the epiglottis when it complicates scarlet fever. It is, as a rule, limited to the faucial and nasal surfaces; though in one instance it extended along the lachrymal duct to the left eye, causing much tumefaction and redness of the skin over the nose and eyes, destroying the eye and producing a thick pseudo-membranous exudation on the under surface of each eyelid. It is well-known that when diphtheria occurs, it attacks by preference those surfaces which are already the seat of inflammation. This is my explanation of the fact that in the case now before the society the specific inflammation was so extensive over the air-passages.

"We have now in the city a distinguished specialist in throat diseases, Dr. Mackenzie, and we have this week an opportunity of hearing his remarks on diphtheria. Specialists are apt to look at diseases in the light of the specialty to which they devote their attention. Contrary to the opinion of many specialists in throat diseases, I have no doubt that diphtheria is primarily a constitutional disease; among other reasons, from the fact that in certain malignant cases the kidneys are affected as early as the second day, showing blood-contamination; from the fact that some cases have an incubation of six or seven days, and local treatment, however early, and perseveringly used, does not prevent blood-poisoning in severe cases.

"It is evident that diphtheritic laryngitis, of which our patient died, can only be successfully treated by solvent inhalations, or, if they fail, by tracheotomy. From experiments made in the New York Foundling Asylum, it was shown that a two per cent. mixture

of liquor potassæ in water is a more efficient solvent than any other agent which is commonly used, and with this dilution it does not cause smarting or irritation of the healthy buccal or faucial surface. It is acrid and irritating in its nature, and I am afraid that in this proportion it may irritate those surfaces which are already inflamed in diphtheria. I therefore give the following prescription, to be used almost constantly by the steam atomizer: Liq. potassæ, ʒ i.; aquæ calcis, ℥ vij. The liquor potassæ being still farther diluted by the steam from the boiler, reaches the faucial and laryngeal surfaces in the proportion of one part to eighty-four. Of course, diphtheria, when it complicates scarlet fever, requires even more active stimulation than when it is idiopathic. I am in the habit of giving one teaspoonful of brandy or whiskey every half hour to a child of three years having these two infectious maladies. On some other occasion I hope to give statistics of the antiseptic treatment of scarlet fever and diphtheria by Listerine, which I am now using locally and internally, in conjunction, it is true, with the old remedies."

Dr. Briddon asked concerning the frequency with which a punctate scarlatinous form of eruption occurred in diphtheria. He was of the opinion that such an eruption appeared not infrequently.

Dr. Smith said that an efflorescence frequently accompanied diphtheria, but he thought it was so distinct in its appearance as not to lead to error in diagnosis by the eruption. In the case reported the scarlet-fever efflorescence preceded the diphtheria by two days. In most instances in his practice, where diphtheria had complicated scarlet fever, the complication developed at about the third or fourth day.

Dr. Briddon said that he had been accustomed to regard cases such as Dr. Smith had reported as diphtheria attended by a cutaneous efflorescence, which he thought could not be distinguished from the efflorescence of scarlet fever.

Dr. J. C. Peters referred to the fact that, thirty or forty years ago, in nearly all severe cases of scarlet fever there was the same diphtheritic appearance in the pharynx and sometimes in the larynx as seen in Dr. Smith's specimen. All the old books described scarlatina anginosa as a disease with diphtheritic exudation upon the uvula, pharynx, and, occasionally, within the larynx.

Dr. Van Santvoord suggested that the continued high temperature in Dr. Smith's case was in favor of scarlet fever, and would aid in making a differential diagnosis between the two diseases.

Dr. Smith said that he appreciated the difficulty in making an exact diagnosis, especially in scarlatina anginosa, to which Dr. Peters had alluded. That is, a malignant form of scarlet fever occurred in which, after the disease had lasted a few days, the surface of the mucous membrane of the fauces became jagged and foul, and then the appearance was very much like that presented in diphtheria. Still there were cases in which the diagnosis was easy, and in which it could be stated positively that diphtheria complicated scarlet fever, especially where there had been faucial inflammation, moderate in character, followed by grave symptoms attended by the appearance of membrane upon the tonsils.

Dr. Ripley regarded Dr. Smith's statement as an important one, namely, that during the prevalence of diphtheria in the city, cases of scarlet fever were very liable to be complicated with diphtheria. He had also observed the same fact with reference to measles. He saw no reason for doubting the diagnosis of scarlet fever complicated with diphtheria in the case reported.

With regard to diphtheritic croup as a complication, he was somewhat surprised in hearing that Dr. Smith had not seen it more frequently. Dr. Ripley had performed tracheotomy for diphtheritic croup complicating scarlet fever at least three times during the last year. During the last few years, also, he had frequently seen croup as a complication of diphtheria; that is, the false membrane had often invaded the larynx.

Dr. Smith thought that, in a large majority of cases, where diphtheria complicated whooping-cough and measles, diphtheritic croup developed. But in his experience, diphtheritic croup complicating scarlet fever had been rare.

Dr. Van Gieson had met with three cases. In one the eruption had begun to subside, the temperature was falling, but at the end of the fifth day the child became slightly hoarse, and upon that fact he based an unfavorable prognosis. The patient died twenty-four hours afterward with all the symptoms of suffocative croup. He regarded the development of hoarseness on the third, fourth, or fifth day in the course of scarlet fever as a very ominous symptom.

Dr. Tauszky regarded the inflammatory condition preceding the appearance of the croup as an important factor, and a condition which was present invariably. This being true, it ought to be utilized in the prophylactic treatment of all cases during an epidemic of diphtheria. Every catarrhal inflammation of the fauces should be treated, and possibly in that way diphtheria might in some cases be prevented.

THE PRESENCE OF PUS-CORPUSCLES IN THE BLOOD-VESSELS IN PYÆMIA.

Dr. C. Heitzmann exhibited a microscopical specimen from a forming pyæmic abscess of the liver. Pyæmia in former times was termed "pernicious intermittent fever," was believed by Cruveilhier to be intimately connected with purulent phlebitis, while Piorry proposed the name *pyœmia* upon the suggestion that pus was present in the blood, and that view was corroborated by Schuh, although no one had positively proved the presence of pus-corpuscles in the vascular system. Virchow contradicted this possibility, and Klebs more recently attributed the whole prccess to the presence of infectious germs, penetrating a wound from without, forgetting that pyæmia had been observed when a closed abscess was present in the depth of the tissues without communication with the outer world. The patient (about fifty years of age) whose liver furnished the specimen, was operated upon for cancer of the throat, did well until the tenth day after operation, when suddenly rigor set in, and three days afterward death occurred. Infarctions and abscesses were found in the lungs, the liver, and the kidneys, nowhere large or numerous. Sections through the tissues of the liver at a point where an infarction the size of a hazel-nut had occurred, which to the naked eye looked dark purple red at its periphery, and yellow in its centre, exhibited the following features:

The portal veins were engorged with coarsely granular, irregularly globular corpuscles, red blood-corpuscles, and a finely granular detritus. The coarsely granular bodies were very numerous and showed the characteristics of pus-corpuscles, viz.: the granules of living matter which they contained were of greatly varying sizes. In colorless blood-corpuscles, even

of persons of a good constitution, the granules are more or less uniform in size, and their increase in such an irregular manner could be due only to inflammation. Hence, the diagnosis of pus-corpuscles in the portal veins was made. These corpuscles could not have originated *in loco*, for the surrounding connective tissues displayed very slight, if any, inflammatory changes. A branch of the hepatic artery also contained a limited number of corpuscles of this kind, and pale granular plates, probably detached endothelia of the blood-vessel. Large, coarsely granular pus-corpuscles were present in all the capillaries within the lobules at the place of the infarction. The specimen seems to prove that pyæmia was really caused by the embolic accumulation of pus-corpuscles, which circulate in large numbers in the whole vascular system. The older views concerning the cause of pyæmia unquestionably deserved attention, although it was difficult to explain why pus-corpuscles, collected in a certain vascular district, should excite purulent inflammation in the neighboring tissues.

Dr. Wendt asked Dr. Heitzman if what he called pus-corpuscles were, as he had represented them, some six or seven times larger than the red blood-globules.

Dr. Heitzman answered in the affirmative.

Dr. Wendt said that that fact of itself spoke against the assumption that they were pus-corpuscles, for all observers had found that most pus-corpuscles were of about the same size as the white blood-corpuscles. To him it was a rather novel theory that pus-corpuscles were five or six times larger than red blood-corpuscles, and he thought it required further substantiation than had been offered.

Dr. Heitzman said that he did not wish to claim that these corpuscles were exactly six times larger than red blood-corpuscles, but that they were very much larger than colorless blood-corpuscles. Indeed, it was easy to determine that there were many pus-corpuscles which decidedly surpassed in size the colorless blood-corpuscles.

Dr. Ferguson presented specimens illustrating

THE ANOMALOUS ORIGIN OF THE VESSELS GIVEN OFF FROM THE ARCH OF THE AORTA.

In the examination of one hundred specimens the following varieties had been found: In two instances the left common carotid and the innominate were given off by a common origin. The brachiocephalic, in both instances, was the usual length, and the left carotid was given off close to the aortic arch. In three specimens the left vertebral artery arose directly from the arch of the aorta, between the left subclavian and the left common carotid. In one specimen the innominate was only one-fourth inch in length; the right subclavian and right common carotid arising almost separately.

In addition to these, there were two specimens from the dissecting-room, sent to him by Dr. A. H. P. Senf, in which the innominate and left common carotid had a common origin.

Dr. Ferguson also presented specimens of

ACUTE ENTERITIS FOLLOWING BURNS.

They were removed from the body of a girl nine years of age. On April 16, 1882, she was extensively burned over the body and lower extremities by the explosion of a kerosene lamp. Previous to her injury she was quite healthy. The burns on the anterior surfaces of the lower extremities were of the first, second, and third degrees. Those covering the abdomen were of the first and second degrees. The neck was also similarly burned. She lived seven days after the accident. During that time her temperature, pulse, and respiration were elevated; pulse was rapid and feeble, ranging from 120 to 150 per minute; respiration, 28 to 48; temperature, 99.4° F. to 102° F. The patient did not rally from the shock, and was delirious most of the time. There was no diarrhœa.

The autopsy was made ten hours after death. The lower lobe of the right lung was in the condition of red hepatization; the lungs, in other respects, were congested and œdematous. The intestines were congested throughout. The mucous membrane of the lower half of the ileum was intensely congested and swollen, Peyer's patches and the solitary follicles standing above the mucous membrane. The first preparation was the last six inches of the ileum, showing two or three of Peyer's patches much swollen; also many solitary follicles.

The second specimen from the same body was a portion of the ascending colon, showing the prominence of the solitary follicles.

The President referred to Brown-Séquard's theory, namely, that ulceration of the intestine is reflex from the spinal cord, and that it could be produced at will in animals. He inquired if it was a fact that ulceration of the intestine rarely occurred after extensive burns?

Dr. J. C. Peters said that ulcer of the duodenum was at one time supposed to be a very frequent result in extensive burns, and that several cases were reported and had been published in the Transactions of the Society.

UTERUS AND APPENDAGES OF A WOMAN WHO DIED WHILE MENSTRUATING—NO MARKED HYPERTROPHY OR DESTRUCTION OF MUCOUS MEMBRANE.

Dr. E. C. Wendt presented a specimen of the uterus and appendages removed from the body of a woman who had died of pulmonary œdema, in the course of chronic diffuse nephritis. It was obtained a few hours after the death of the patient, who was menstruating when she died. The woman was a multipara, about twenty-eight years of age.

On examining the pelvic cavity, the uterus was found attached posteriorly by superimposed layers of partly organized perimetritic membranes. Both ovaries appeared globular, and had a purplish hue. On the left side the fimbriated extremity of the oviduct was intensely red, and seemed to hug the enlarged ovary. A recent hemorrhagic effusion was found in the latter organ. The right ovary contained a clot of the size of a hickory-nut, its color being a dirty brownish red. In addition, a small sebaceous cyst was also discovered adjoining the clot. This cyst contained the usual yellowish, gritty substance, mixed with numerous hairs. In the interior of the cyst cavity, a reddish body, seemingly well organized, was found attached to the cyst wall by an extremely slender pedicle. What, if any, pathological significance could be properly attached to this little polypoid body did not appear clearly established. The Fallopian tube of that side was devoid of a fimbriated extremity, nor could any abdominal opening be found. This had evidently become obliterated, in consequence of local inflammatory deposits.

The occlusion of this orifice was not devoid of some practical interest; for ovulation on the side in question could not be followed by the entrance of

the ovum into the right Fallopian tube. Such a condition might, therefore, be readily conceived to predispose to extra-uterine pregnancy.

The point of chief interest, however, was the interior of the womb, and the condition of its mucous membrane.

On opening the organ, the uterine cavity was found to contain about twenty drops of fluid blood, which was devoid of all odor. After this had been very gently removed, the mucous membrane appeared, with a faintly rose-colored surface, without a single fold, and apparently not at all, or only very slightly thickened. Further examination elicited the fact that a small number of quite superficial hemorrhages had taken place into its substance. But beyond this no change was discoverable. Of course from a single observation of this kind no general inference could or should be drawn. Nevertheless it did show that the changes now commonly held to take place during menstruation were not of unexceptional occurrence. But the case seemed more particularly interesting and important, as affording corroborative evidence of recent assertions made by Dr. Möricke, formerly Schröder's first assistant, at the gynecological clinic of Berlin. In this connection he would briefly allude to some of the more important recent contributions to the histological processes involved in menstruation. It would be remembered that in 1873 Kundrat and Engelmann had stated, as the result of an extensive series of investigations, that not only a large proportion of its lining epithelia suffered destruction, but that a portion of the mucosa itself was regularly shed at each menstrual period. These authors also found the interglandular tissue much richer in round corpuscles than normal. Moreover, according to them, fatty degeneration both of epithelia and blood-vessels invariably occurred in conjunction with the flow. This fatty metamorphosis was not only independent of the hemorrhage, but the catamenial flow was directly attributable to it. Later, Williams (*Obstet. Journal Great Britain*, February and March, 1875; *ibid.*, December, 1877) even went so far as to claim that the entire mucosa was constantly destroyed, and that complete regeneration regularly occurred in the intermenstrual period. This restitution he supposed took its origin from the muscular walls of the uterus. More recent researches by Leopold (*Archiv f. Gynäk.*, vol. xi.) and Wyder (*ibid.*, vol. xiii.) have led to still more conflicting views concerning the tissue-changes which characterize the uterine mucosa during the menstrual epoch.

The latest, and to Dr. Wendt's mind the most trustworthy and convincing publication, was found in vol. vii. of the *Zeitschrift für Geburtshülfe und Gynäkologie*. Dr. Möricke, who was the author of the exhaustive essay already referred to, minutely described the structure of the mucous membrane of the uterus at different periods of life, and more particularly immediately before, during, and after menstruation. He had conclusively demonstrated that fatty degeneration did *not* take place in connection with the catamenial flow.

His method of procedure was certainly a novel, if not a somewhat barbarous one. With a sharp curette he removed portions of the mucosa from the uteri of living women, at different times, before, during, and after the period. These fresh, one might say living specimens, were then immediately submitted to microscopical examination. As the result of a rather large series of observations of this kind, the author positively asserted that the mucous membrane of the uterus was neither entirely nor yet in part destroyed during menstruation. It even invariably retained its ciliated epithelial lining. There was no increase of corpuscles in the interglandular tissue, and fatty degeneration even moderate in extent was never observed. There was, however, vascular dilatation and some extravasation of blood in the superficial layers of the mucosa. The homogeneous basis substance was always increased. Finally the changes described again and again by other authors must be regarded as the expression of post-mortem changes which are proven to take place very rapidly in the uterine mucous membrane.

Dr. Heitzman said that in his laboratory had been examined shreds of the so-called decidua catamenialis, and what he had seen was certainly not fatty degeneration, not the cloudiness of modern observers, neither so-called granular degeneration. If it was known what the process consisted in, it was an augmentation of the living matter within the epithelia and in the cells in the tissue beneath the epithelia. What formerly was supposed to be fatty degeneration, and at present called cloudiness, was nothing but an increase of living matter, the points of intersection of the reticulum being enlarged. The whole process was a low grade of inflammation.

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 2, 1882.

Fordyce Barker, M.D., LL.D., President, in the Chair.

MANAGEMENT OF LABOR WITH REFERENCE TO THE PREVENTION OF SUBSEQUENT UTERINE DISEASE.

Dr. W. E. Forest presented a paper on the above subject, which was read by Dr. Katzenbach, and in which he directed attention, first, to the practical aspect of the subject, and second, to certain anatomical and physiological facts. The most generally accepted causes of uterine disease subsequent to labor were, first, laceration of the cervix and pelvic tissues; and, second, sub-involution both of the uterus and of the vagina, either with or without laceration. Laceration of the cervix as a cause was the first in time as well as in importance, and the author of the paper then proceeded to study the manner in which lacerations were produced and the means by which they were to be obviated. In connection with this part of the subject reference was made to the writings of Dr. Emmet and Dr. Sinclair, in which it had been made to appear that the most prominent among the causes of laceration of the cervix was a rapid first stage of labor. Dr. Forest, however, believed that a rapid first stage of labor was an infrequent cause of laceration of the cervix. He believed that normal dilatation of the cervix was not a mechanical but a physiological process; that it was rather a relaxation than a dilatation, and that the preparation for this process commenced weeks before labor was established. This part of the subject the author of the paper illustrated with diagrams made from frozen sections of the uterus and pelvic organs. The conclusions which he reached were, first, rapid labors are natural except when there are disturbances of nerve-force; second, that there might be no more pressure in rapid than in tedious labor; third, in rapid labor the resiliency of the cervix is not exhausted by long-continued pressure.

Another cause of laceration of the cervix was tedious first stage of labor. According to the same authorities, to whom he again referred, this was a very prolific cause of laceration of the cervix. The remedy, therefore, was apparent, that is, to prevent a tedious first stage of labor. The object to be accomplished was, to restore the harmony of action which should exist between the body of the uterus and the cervix, and this could be accomplished by anything which quieted perverted nerve-force. The remedies ordinarily used were morphine and chloral, which regulated nerve-function, and by so doing allowed dilatation to take place. In addition, gentle digital dilatation might be resorted to for the purpose of restoring the normal relations existing between the external os and the lower uterine zone.

With reference to the use of forceps as a cause of lacerations of the cervix, it was impossible to say how often it was produced by the instrument, but the conclusion which the author reached was that laceration of the cervix was seldom caused by the use of instruments when they were carefully and properly employed.

Laceration having occurred, notwithstanding all the precautions used, how was it to be treated? The ordinary way of treating a lacerated wound was by keeping the surface clean, by the use of stitches, or plasters, or compresses which brought the lips of the wound into apposition. In this instance, however, stitching was hardly to be thought of; neither could plasters or compresses be applied. The author then briefly alluded to the use of elastic bands applied to the cervix on the third or fourth day after confinement, in the meantime strict cleanliness having been secured by vaginal injections with antiseptic solutions. On the third or fourth day, other things being equal, the parts might be exposed, the lacerated surfaces brought into apposition, and the elastic band slipped over the torn cervix. In a certain number of cases this method of treatment had apparently been beneficial. The number, however, was too small to allow of any deductions, but at the same time it seemed to be a method worthy of trial. The special effort of the accoucheur, however, should be directed toward prevention of laceration.

With reference to subinvolution, the author of the paper believed it was not so much a cause of uterine disease as a disease itself. Reference was then made to the conditions which might interfere with normal involution, and among them laceration of the cervix was most prominent. Again reference was made to Dr. Emmet's writings and to Sinclair's tables.

Laceration of the perineum had also been said to be a cause of subinvolution of the uterus. In Dr. Sinclair's tables, however, it became apparent that such a laceration favored involution rather than otherwise. Perhaps this apparent paradox could be explained on the ground of additional precautions being taken with reference to cleanliness when it was known that laceration existed. The number of cases, however, which appeared in Dr. Sinclair's tables were hardly sufficient to establish any principle. The conclusion reached was that normal involution would probably be interfered with if laceration of the perineum extended into or through the sphincter.

Septicæmia had also been regarded as a cause which interfered with normal involution. Dr. Forest thought, however, that there was hardly any excuse for the development of septicæmia in these days of antiseptics. Brief reference was then made to the views which have been published concerning the time when the patient should get out of bed, and allusion was made to the views of Dr. Goodell concerning the advisability of the woman assuming the upright position a few days after confinement.

Dr. Beckwith being requested to open the discussion, said there were many points of interest in the paper which he would like to discuss, but he did not feel able to do so without previous preparation. He fully agreed with the author as to the importance of making a careful examination of the uterus and its appendages, and of the vagina, within six weeks after delivery.

Dr. Castle could not fully accept all the author's views with regard to the rationale of laceration of the cervix. He was of opinion that a disparity between the size of the brim of the pelvis and of the head of the child was sometimes the real cause of laceration of the cervix, when the supposed cause was rigidity of the os. He thought Dr. Forest's views with regard to an œdematous condition of the cervix were open to criticism. Dr. Castle believed that the softening which took place in the cervix up to the first stage of labor was largely due to a condition of œdema, and was desirable in order that dilatation might properly take place. Dilatation was also assisted by the hydrostatic pressure exerted upon the cervix by the bag of waters, and when this ruptured too early there was greater liability to laceration.

Dr. C. C. Lee fully agreed with the author of the paper that in the majority of cases in which laceration of the cervix was sufficiently extensive to be appreciated by the accoucheur it was due to tardy labor, which had produced an œdematous or macerated condition of the cervical tissues. Laceration, however, to the degree referred to by the author, had rarely taken place in the cases of rapid labor which had come under his care. In cases of arterial hemorrhage which was very difficult to account for occurring after labor, he had often made an examination with Sims' speculum, and found the origin of the hemorrhage to be in a laceration of the cervix. With regard to closure of the laceration immediately after its occurrence, a procedure of which Dr. Pallen was a strong advocate, he had done it in two cases. In the first case, that of a primipara, the laceration extended to the utero-vaginal junction. He closed the wound with silk sutures, exercising the greatest care, but within three days all the sutures had cut through the tissues and the operation was a complete failure. In the second case the patient was a multipara, and the silver-wire suture was used, but the result was the same as that in the first case. Dr. Lee spoke of tedious labor, particularly in the second stage, as the great cause of vesico-vaginal fistula. The methods for hastening delayed labor with a view to avoiding this and other serious results, which were recommended by the author of the paper, were such as Dr. Lee had also adopted and had found of great benefit.

Dr. W. T. Lusk said that it was considered among women a great recommendation for an accoucheur if it were said of him that he never lost a case. He thought that in the future the question which would be asked as a proof of the accoucheur's merits would be, What has been the condition of his patients some time after confinement? He said that in those cases of rapid labor in which the patient's nervous

system was in such a condition as to lead her to bear down strongly almost from the beginning, bad lacerations were liable to occur. In such cases the disorder of the patient's nervous system should be controlled by such means as were at our command (anæsthetics, etc.) in order to avoid these bad results. He seldom employed digital dilatation of the cervix, which acted simply in a mechanical manner. He used Barnes' dilator, which simply rendered the cervix tense and excited normal uterine pains, and when these occur the cervix, which was previously rigid, became soft and the dilator was expelled. If required, it could be reinserted. Whenever it became necessary to use the forceps, traction force should be exerted only during the intervals between the pains, at which time the parts were relaxed. If it were exerted during a pain, when the parts were rigid, laceration would almost surely occur.

Dr. S. T. Hubbard thought that in the matter of the statistics quoted by Dr. Forest, if an examination had been made twenty days, instead of sixteen days after confinement, fewer lacerations would have been found; some of those mentioned would probably have healed in the meantime. Many years ago he found recommended in Byrne's "Midwifery" the administration of fifteen or twenty drops of laudanum every hour or so in certain cases of tedious labor, and having adopted the suggestion it had often proved of great benefit. He had found with Dr. Forest that most of the cases of tedious labor occurred among the strong and robust, as among the laboring Irish women, while the less sturdy, and even those far advanced in phthisis, gave birth to children with comparative ease.

The Academy then adjourned.

A New Method of Staining Nerve-fibres.—Professor Weigert, of Leipsic, has found a new and more effective way of staining the nerve-fibres of the central nervous system. The method consists in staining the preparations in acid fuchsin (fuchsin, S. 130 of the Berlin Aniline Manufacture), washing in a weak alcoholic potash solution, and then mounting in the ordinary way in Canada balsam. This method has great advantages above all other methods; it selects the nerve-fibres only, of which it stains portions of the medulla, while it leaves the axis cylinder free, and it picks out the smallest fibres, such as no other reagent, not even gold chloride, does. The aniline colors, now so much used by German pathologists, are obtained by them, says a correspondent of the *Lancet*, from Dr. Gübler, 17 Dufour Strasse, Leipsic. Many of them can be obtained in this city, however.

A Severe Operation.—At the Surgical Section of the Association of German Naturalists and Physicians, Professor König showed a patient in whom he removed the greater portion of the sternum, which was the seat of a rapidly growing osteo-sarcomatous growth. The whole of the sternum, except the uppermost part and the xiphoid process, was removed, and during the operation air entered both pleural cavities, and also the pericardium, which was found adherent to the sternum, and was opened during the operation. The patient made a good recovery, and the wound is now almost entirely healed, except at one point, where a portion of an adjacent rib is necrotic and keeps up some little suppuration.

Correspondence.

BLACK ANTS AS ANTISCORBUTIC FOOD.

To the Editor of The Medical Record.

Sir: I have just been reading in The Record for September 23d Lieut. Schwatka's article on scurvy, and wish to call attention to an article of diet, which, if procurable in sufficient quantities, might be a valuable addition to the Arctic voyager's diet-list, namely, the large black ants found in the wood of the pine trees. Scurvy very frequently attacks the lumber men of Maine, and they adopt this food as a remedy when suffering from the disease. Indeed, some of them become so fond of it as to eat these ants whenever they can be found. As these insects retain their vitality while frozen imbedded in the wood-dust which they themselves make, might it not be possible, if they could be collected in sufficient quantity, to carry them frozen and packed in sawdust till needed for use? Of course, the question arises, how long will they retain their vitality in this condition? Are there not many classes of hibernating insects which might answer the same purpose?

This is simply a suggestion which occurred to me while reading Lieut. Schwatka's very valuable paper. It may be of no value, but as I do not expect to have an opportunity of studying the disease, scurvy, I venture to state a fact in apparent confirmation of his theory with a view at least of directing attention to a new point in the discussion of the subject.

Yours respectfully,

E. F. Brush, M.D.

Mount Vernon, N. Y.

PLUMBERS AND ZYMOTIC DISEASES.

To the Editor of The Medical Record.

Dear Sir: In Dr. John F. Ridlon's interesting comments on my communication to The Record of October 14th, concerning "The Exemption of Plumbers from Zymotic Diseases," he overlooks the fact that my paper did not refer to plumbers and their families, but to the plumber as an individual. It is hardly necessary to observe that plumbers are not accompanied by their families while making repairs, and therefore the plumber as an individual is exposed to very different morbid influences from those to which his family is subject. It is very interesting to know that the plumbers' children, "though sleeping in the same room with their parents, suffer from zymotic diseases quite as often as other children." since, as statistics show us, unless phthisis and pneumonia are zymotic diseases, the plumber stands unscathed and germ-proof in the midst of mephitic exhalations.

Respectfully yours,

F. A. Burrall, M.D.

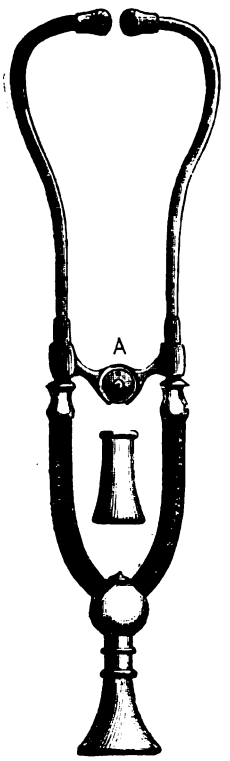
48 West Seventeenth Street.

Tincture of Burdock in Psoriasis Inveterata.—Dr. Reiter writes to Squibb's *Ephemeris*, giving an account of a cure in his own case of chronic hereditary psoriasis by the use of tincture of burdock (Rappa major) seed. The maximum dose used was ʒ iv. t. i. d., to be kept up for four months if necessary. The doctor had suffered from the disease for many years.

New Instruments.

IMPROVED CAMMAN'S STETHOSCOPE.

By T. A. McBRIDE, M.D.,
VISITING PHYSICIAN, PRESBYTERIAN HOSPITAL, NEW YORK.



The Camman binaural stethoscope has been much improved by an ingenious device of Mr. Ford, of the surgical instrument department of Messrs. Caswell, Hazard & Co. One great objection to this instrument has been the manner in which the aural extremities have been kept in place in the meatus auditorii. The india-rubber band which was formerly used would exert too little or too great pressure, and noise was often produced by its vibrating in the expired air, and, moreover, it had often to be replaced. As a substitute for this, a spiral spring concealed in a tube was employed, but this, if not kept carefully oiled and clean, produced more or less noise. Mr. Ford has apparently surmounted these difficulties, and now presents a perfect instrument. The spring from which the requisite amount of pressure is obtained is concealed in the hinge, which connects the aural extremities. The strength of this spring may be graduated to the individual case. No noises are now heard, and, as I say, the instrument is now apparently perfect in every way.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 4, 1882, to November 11, 1882.

Spencer, W. C., Surgeon. In addition to his duties at Fort Snelling, Minn., to perform the duties of Attending Surgeon at Department Headquarters. S. O. 176, Department of Dakota, October 24, 1882.

Ainsworth, F. C., Assistant Surgeon. Granted leave of absence for one month with permission to apply for extension of one month. S. O. 120, Department of Texas, November 1, 1882.

Ainsworth, F. C., Assistant Surgeon. The leave of absence granted November 1, 1882, is extended one month. S. O. 121, Military Division of the Missouri, November 9, 1882.

Barnett, Richards, Assistant Surgeon. Granted leave of absence for one month with permission to apply for extension of five months. S. O. 202, Department of the East, November 1, 1882.

Brewster, Wm. B., Assistant Surgeon. On being relieved by Acting Assistant Surgeon Potter, will proceed to Fort Bridger, Wyoming, reporting to the Commanding Officer thereof for duty. S. O. 116, Department of the Platte, November 4, 1882.

Gray, W. W., Assistant Surgeon. Granted one month's leave of absence on Surgeon's certificate of disability, with permission to apply for an extension of five months. S. O. 103, Department of the South, October 31, 1882.

O'Reilly, Robert M., Captain and Assistant Surgeon. Detailed member of Board of Officers to assemble at Washington, D. C., to examine into and report upon qualifications of candidates for Superintendents of National Cemeteries. S. O. 254, A. G. O., October 31, 1882.

McElderry, Henry, Assistant Surgeon. Upon arrival of Assistant Surgeon Brewster at Fort Bridger, Wyoming, to be relieved and ordered to Fort Robinson, Neb., to report to the Commanding Officer thereof for duty. S. O. 116, Department of the Platte, November 4, 1882.

Appel, Aaron H., First Lieutenant and Assistant Surgeon. Leave of absence extended two months. S. O. 255, A. G. O., November 1, 1882.

Brechemin, Louis, First Lieutenant and Assistant Surgeon. Leave of absence for five months granted. S. O. 259, par. 2, A. G. O., November 6, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 11, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Nov. 4, 1882.	0	28	14	3	6	37	1	0
Nov. 11, 1882.	0	26	36	7	13	37	2	0

Dr. Paul F. Mundé has been appointed gynecologist to Mount Sinai Hospital, to fill the vacancy caused by the resignation of Dr. Noeggerath.

A Law Forbidding the Sale or Use of Toy-pistols has been passed by the Vermont Legislature.

An Anti-Tobacco Law.—A bill has been presented to the Michigan Legislature forbidding the use of tobacco by boys. The *Free Press* now urges the passage of an "Anti-pie Law," to prevent the "enormous and growing evil" of eating too much pie.

The Warren Triennial Prize. — The Warren Prize Committee offer a premium of four hundred dollars for the best dissertation, worthy of a prize, upon the following subject: "Chronic Bright's Disease (parenchymatous and interstitial nephritis). The Nature and Mutual Relations of the Derangements in the Circulatory and Secretory Organs."

Dissertations should be forwarded to the Resident Physician, Massachusetts General Hospital, Boston, on or before February 1, 1883.

The First Successful Ovariotomy in Bellevue Hospital was performed by Dr. W. Gill Wylie recently. The operation was done in the new pavilion.

A Wholesale Chemist in London manufactures one ton of homœopathic globules annually.

"Compound Oxygen."—Professor Prescott, of the University of Michigan, has been analyzing several brands of this widely advertised substance. One bottle, labelled "Compound Oxygen—Keep Dark," was found to be a colorless aqueous solution of nitrate of ammonium and nitrate of lead, the two salts being in nearly equal proportions, and together forming about three per cent. of the solution. A companion bottle, labelled "Oxygen Aquæ for Digestion," was found to be water of a commendable degree of purity, quite free from sophistications. Probably this is the original compound oxygen. Another compound oxygen contained nitrate of ammonium alone; a fourth specimen, from Boston, was a colored, fragrant liquid, consisting of alcohol, chloroform, and balsam of tolu.

Norwegian Cod-Liver Oil.—Consul Gade, of Bergen, Norway, writes to the Department of State that against last year's yield of 11,500,000 fish, the net result of this year is estimated at only 5,300,000 fish and 9,300 barrels of liver, producing, in all, 4,100 barrels of oil, of which a little more than 2,000 barrels will be exported as steam-refined, first quality.

Friedrich Woehler, the Nestor of chemistry, died at Göttingen, on September 23d, after a brief illness (of four days), aged eighty-three. He was born on July 31, 1800, at Eschersheim.

Quinine.—At present there is not much prospect of a lower price, since the influence of speculation has outstripped that of normal demand and supply.

The consumption of quinine is constantly on the increase Of the 4,000,000 ounces consumed in 1881, about 1,600,000 ounces fall to the share of the United States, and only one-third of this quantity is imported from Europe, the other two-thirds being manufactured here. The American manufacturers have been constantly endeavoring to have the import duty re-imposed upon foreign quinine, and to have the crude material placed on the free list: their efforts have been successful only with regard to the latter point. From and after January, 1883, East Indian bark will be admitted duty free, the same as South American barks.

Condurango.—Mataperro-condurango (from Ecuador) has suddenly again come into favor, and the supplies are about exhausted. The new German Pharmacopœia has recognized this bark. Venezuelan condurango, really the stems of guaco (*stipites guaco*), has constantly been in limited demand, and appears to have as much therapeutic effect as the former.

"Vesico-Vaginal Fistula Cured by Position" is the title of a case published by Dr. J. T. Winn in the Virginia *Medical Monthly*. The fistula occurred in a woman recently confined. She was told to assume the genu-pectoral position at intervals, thus allowing the urine to accumulate in the fundus of the bladder. No catheter was used. A moderately strong solution of sodium bicarbonate was used as an injection immediately after each urination. In twenty days the cure was complete.

Sewage Gas Poisoning.—The Philadelphia *Medical Times* contains the report by Dr. J. T. Eckridge of an interesting case of the poisoning of a strong healthy man who went into a privy-well, about fifteen feet deep, for the purpose of cleaning it. Before going in a light had been lowered, but it was not extinguished, and it is important that the fact should be made known that this is no sufficient test of the presence of deadly gases in such places. The poisonous gas in this case was probably either sulphureted hydrogen or sulphide of ammonia, or a mixture of the two. Insensibility was rapidly produced, and his condition for several hours was such that death seemed almost inevitable. He was saved by twelve successive injections of aqua ammonia into the superficial veins of the forearm, a heroic method of treatment, used only as a last resort after all the usual methods had failed.

A Novel Use for Pepsin.—Dr. Hollmann (*Nederland Weekblatt*, 18, p. 272) has used an aqueous solution of sixteen grains of pepsin as an injection into the bladder of a patient who had hæmaturia, and in whom a catheter failed to empty the bladder. A few hours later, a dark, viscid, fetid fluid readily escaped through the catheter.

Viburnum Prunifolium.—Dr. O. E. Herrick, in commenting upon the occasional toxic effects of viburnum prunifolium (dryness of mouth, dimness of vision, dizziness, etc.), says: "Next to ergot I place more dependence upon viburnum in the treatment of diseases of females than any other agent for internal administration. Its action is not limited to the prevention of miscarriage by any means, but it is alike applicable in cases of uterine engorgement, ovarian irritation, and numerous other conditions of the female sexual organs."—*Obstetric Gazette.*

A Large Lunatic Asylum has recently been erected at Bayreuth. We are told that it has nothing to do with Herr Wagner or his music.

A National Vaccine Institution.—Dr. W. E. Bessey is making strenuous efforts to establish a national vaccine institution in Canada. A small appropriation has already been obtained for this purpose.

The National Drug Association held its annual meeting at Peoria, Ill., on November 8th and 9th. It will meet next year in this city.

A Stupid Town.—Certain citizens of Red Bank, N. J., have begun an action for conspiracy and libel against John H. Cook, editor of the Red Bank *Register*, for publishing certain statements regarding the prevalence of typhoid fever. The principal matter in dispute seems to be the number of cases said to be typhoid fever, which, it is alleged, were overstated by Mr. Cook, it being held by the citizens of the town that there was only one case, and that an imported one, and that the other cases were "typho-malaria." When the strength of the case depends on a fever being "typho-malarial" instead of typhoid, it would be far wiser to clean out the privies than go to law.

The "Raspberry" Vaccination Scar, and its Guarantee of Protection from Small-Pox.—Dr. Richard C. Newton, Assistant Surgeon, U. S. Army, Fort Cummings, New Mexico, writes: "I have read with interest during the past summer a good deal of matter relative to vaccination and vaccine virus, which The Record and other journals have set before their readers. And although the gentlemen who are interested in vaccine farms are thoroughly convinced that their particular brand of virus is all sufficient, others have grave doubts as to what form of vaccine it is best to use. Without in any manner

considering myself competent to enter into this discussion, I wish to relate, very briefly, a case of my own, because, as it seems to me, it throws some light upon the matter, and may be of help to both practitioners and patients.

"I have always used fresh bovine virus and have generally been satisfied with the results. I even supposed that the 'raspberry' scar indicated that a modified protection against small-pox had been obtained.

"I noticed that a writer in THE RECORD denounced this peculiar scar as of no avail because it follows a worthless bovine (?) vaccination.

"Last August I saw J. R——, aged twenty-eight; American; healthy; good family history; by occupation a railway employee, although he was then in a mining camp. At first he had the lumbar pains, fever, cough, and great depression; these soon developed into a well-marked case of discrete small-pox. The man was isolated, and the best care possible, under adverse circumstances, was taken of him. He did not recollect having been vaccinated in childhood. He had nursed a case of small-pox; after which, he had been vaccinated, this was about five weeks before I saw him. He said that a doctor whose name he did not know had vaccinated a large number of railroad men, himself among them, and as nearly as I could judge from the patient's account, the physician had used a cone of bovine virus. The man said that the vaccination had "taken" well, and he supposed himself amply protected. This conversation occurred about ten days after I first saw the case. I rather doubted the word of my patient, who thereupon pulled up his sleeve and showed me a distinct 'raspberry' scar on his arm, and this was surrounded by the umbilicated pustules of small-pox. No other vaccination marks could be discovered on either arm, although of course, some might have been present and not discernible.

"The man died in the third week of the disease, after the case had passed out of my hands. I heard, however, that he ran out in a violent shower of rain. With better surroundings I should have expected a favorable result; although I no longer believe in the modified protective influence of a vaccination leaving, a 'raspberry' scar."

SUFFOCATION BY ILLUMINATING GAS.—From July 1st there have been fourteen deaths from the escape of illuminating gas in bed-rooms. The last two cases occurred during the past week. Most of them have resulted from blowing out the gas.

DR. EDWARD C. SEGUIN.—Several of the medical societies of this city have very appropriately passed resolutions expressing sympathy with Dr. Seguin in his recent affliction. He sailed for Europe on Wednesday last, with the intention of remaining abroad for a considerable period.

INOCULATION IN THE TREATMENT OF PANNUS.—Dr. Edward S. Peck writes: "In THE MEDICAL RECORD for November 11th, p. 560, the above caption is followed by this sentence: 'The heroic measure of inoculating gonorrhœal pus for the relief of severe pannus has been tried in three cases in the Ophthalmic Division of Charity Hospital,' etc. I desire to anticipate an erroneous impression which might attach to this statement, and to state that only *one* patient was inoculated with gonorrhœal pus, the second and third patients having been treated with a simple traumatic urethritis, as your extract states several lines below. The first case was detailed in your journal July 2, 1881. In this case gonorrhœal pus was resorted to after the failure of, 1, laudable pus from a post-aural incision; 2, pus from an adult purulent ophthalmia; 3, pus from a case of ophthalmia in the newly born. The results were so marked that I was induced to inoculate, with their consent, two other patients with a simple urethritis from a private patient, in co-operation with a distinguished writer on genito-urinary diseases, of this city, in whose care he was at that time. It is to be noted that all four eyes were materially improved in vision, though one had a perforated cornea. Gonorrhœal pus should never be used until other and presumably less virulent types have been tried."

AN EPIDEMIC OF TYPHOID FEVER AT PROVIDENCE, R. I.—Typhoid fever is said to be prevailing extensively at Providence, R. I. The fever began to manifest itself early in the fall, and seemed to spring up immediately after the continuous and heavy rains which visited that section of the country then. The disease is not confined to the city. In East Providence nearly fifty cases were reported last week, while some have gone so far as to credit Providence with two thousand cases of various kinds of fever. The latter figures are, no doubt, rather too large.

A NEW MEDICAL COLLEGE AT SAN FRANCISCO.—A new building has been erected by Dr. L. C. Lane, at a cost of about $85,000, on a lot worth $15,000, and conveyed by him as an unreserved donation to the Cooper Medical College, which is a reincorporation of the Pacific Medical College, the Faculty of which remains unchanged. The college is named after Dr. Elias S. Cooper, now deceased.

OVARIOTOMY IN AN INFANT.—Dr. Hingston, of Montreal, recently removed an ovarian tumor from a child two years of age. The patient was doing well at last account.

DR LYONS, M. P. for Dublin, has been appointed a Deputy-Lieutenant.

A MEMORIAL FUND TO THE LATE PROFESSOR BALFOUR is to be subscribed at Cambridge. The fund is to be used for the promotion of biological research.

THE END OF THE YELLOW FEVER.—On November 13th, only one new case of yellow fever was reported at Pensacola. The total number of cases at Pensacola is reported to be 2,330, with 191 deaths, a remarkably low death-rate after all.

THE FRESH AIR FUND.—By far the largest and most successful season in the history of the Fresh Air Fund has just been brought to a satisfactory close, and the results are reported in the *Tribune*. A fortnight's vacation was given to 5,599 poor people from the city; 3,944 were received as guests by the people in the country, and for 1,655 board was paid. The total cost was $21,556.01, being an average of $2.85 per child. The work of the Fresh Air Fund began in 1877, with only seventy beneficiaries.

ILLNESS OF SIR THOMAS WATSON.—Sir Thomas Watson is seriously ill and not expected to recover. He is now ninety-one years old. A stroke of paralysis has prostrated him, but left him in possession of his mental faculties. When stricken down, he calmly remarked to an attendant: "This is the beginning of the end."

Original Lectures.

LECTURE ON EMPHYSEMA.

By BEVERLEY ROBINSON, M.D.,

PROFESSOR OF CLINICAL MEDICINE AT THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

GENTLEMEN: The older writers applied the term "emphysema" to an infiltration of air into the cellular-tissue of the lung which lies between the separate lobules. When pathological researches were more accurately made, and auscultation had received its immense impetus from the remarkable work of Laennec and his immediate followers, it was clearly shown that interlobular emphysema was a comparatively rare affection, and that the form usually met with was, strictly speaking, vesicular.* In this latter variety the pulmonary alveoli, and sometimes the terminal divisions of the bronchial tubes are notably enlarged.

This variety is doubly important by reason of its manifest and numerous symptoms, and also by the sequelæ, or resultant changes of tissues and viscera, which are so apt to follow its continuous presence. These changes in the structure of different organs sufficiently explain, in the majority of instances, the symptoms and physical signs which are present. After what precedes we recognize the *vesicular* as the important form of emphysema. In this form there are sub-varieties which receive their special designations from the manner in which the pulmonary tissue is affected. Sometimes only portions of it are implicated, and, indeed, the morbid change is so restricted that one side of a lobule is markedly dilated, while the other half is in its normal condition. This *partial lobular emphysema* does not exist by itself as a rule, but accompanies the *real lobular emphysema*, or the form in which the entire lobule is equally dilated. A frequent site for this form is the free margins of the lungs, and here we often remark at the autopsy numerous dilated air-sacs, which, as Waters remarks, have a similar appearance to that of the bullæ of pemphigus.

Lobular emphysema is a frequent accompaniment of the different forms of pulmonary phthisis, and is also frequently met with in pneumonia. The dilated lobules stand out prominently from the surface of the surrounding lung, and occasionally appear as appendages of some volume. The intervening walls between separate lobules are everywhere apparent, and only in extreme and very rare cases are at all broken down. Anatomically, the air-cells should be all of similar size, but with dried sections they often seem unequal. In many examples this condition would be properly explained by the imperfection of the pulmonary preparations.

The third form of vesicular emphysema is the lobar. It is also the most important. Not unfrequently it attacks both lungs, and may, when extensive, become the immediate cause of death. The aspect of the lung when the chest-walls are removed is quite characteristic. The surface is usually smooth, the marks of the interlobular septa have disappeared; the entire lung bulges forward as if the chest cavity were too small to retain it; the anterior surface of the heart is almost entirely covered by the dilated lungs; upon their exterior surface the marks made by pressure of the ribs are at times very pronounced. If we place our fingers upon it so as to note its consistence, it has a resistance resembling that of dough. Its color is very much that of the lungs of some herbivorous animals. Occasionally the surface of the lung is not smooth, on account of scattered collapsed portions, or appendages of different size and volume, which are much more commonly met with in this variety than in lobular emphysema. At first the air-sacs are merely dilated. Then the septa between the sacs lose in height, become considerably thinner, and finally perforate. The holes in the beginning are small, round or oval. They may also be present in the alveolar walls. These finally give way more and more, until two or more cavities are united in one.

It is at this stage that the inter-lobular walls are frequently lost as a visible appearance upon the surface, and the appendages, due to excessive dilatation, appear along the margins of the lungs. In rare instances interlobular emphysema is then present, and starts in reality to spread from the vicinity of the root of the lung. With extreme dilatation the interior surface of the air-sacs becomes perfectly smooth, owing to the complete obliteration of the dividing septa. The distention of the air-sacs is, of course, accompanied by thinning of their walls, and also by expansion and separation of the elastic fibres which form an integral part of their structure.

In the appendages from the margins we find dilated air-sacs of different sizes. The larger ones are near the distal extremities. The epithelium lining the healthy or dilated air-sacs is similar. In the dilated portions of lung the capillaries are widely separated, and for that reason the lung has here a pale, anæmiated appearance. Now and then a slight hemorrhage occurs from rupture of some one of these small vessels. The fragments left of the dividing walls are moderately vascular, but not sufficiently so to increase in any marked degree the respiratory function of the lung. The perforations of the alveolar walls in lobar emphysema, even when the dilatation is not more pronounced, are more frequent than in lobular emphysema. For this reason it would seem as if the degeneration of lung-tissue were certainly more advanced. The large bronchial tubes are dilated, and the mucous membrane lining them is thickened; the contrary holds true of the small tubes, which are notably narrowed and bloodless. The appearance of the large tubes is darker than in healthy lung. There are no ulcerations in either the large or small bronchial divisions. The circular muscular fibres of the bronchi are certainly more developed than in healthy lungs.

In *interlobular emphysema* the air passes into the cellular tissue between the lobules. Rarely it is an independent affection. Frequently it accompanies vesicular emphysema, especially of the *lobar* form, and when it is unusually extensive.

The air in *interlobular emphysema* may extend throughout the pulmonary structure, may manifest itself under the pleura in rare instances, and may even work its way into the mediastinum and cellular tissue of the neck. The most accentuated forms have shown themselves in children after severe attacks of whooping-cough (Guillot).

The pathology of vesicular emphysema shows dilatation of the alveoli, perforation of the walls of the air-sacs, then atrophy, and finally complete disintegration at certain points. Vesicular emphysema is more marked at the apex and along the margins of

the lungs than in the interior. The pathology must be thoroughly understood in order that wise therapeutics be followed. In a measure the effects of curative agents tend to confirm or invalidate the data furnished by researches into the morbid alterations of the disease. Whenever vesicular emphysema follows a long-continued or violent cough, mechanical violence appears to be the proper explanation of its production. If on the contrary, the disease has marched insidiously without being preceded by cough, it is evident that the changes which occur are of constitutional origin, and the local alterations within the lungs clearly show in what manner the dyscrasia has become localized. The lungs which are emphysematous are pale and anæmic. This is due, doubtless, to the separation and absorption of the capillaries, and inasmuch as less blood is distributed the lungs suffer in their nutrition and atrophy. In the emphysema peculiar to old age the lungs are subject to the same senile changes which appear active elsewhere in the body. In lobar emphysema the pathology is not perfectly satisfactory. It often comes on insidiously, is not preceded by cough, and the patient only complains of sensations of smothering. Some writers have affirmed that in these cases there was fatty degeneration of the walls surrounding the air-sacs. Waters has rarely found this alteration. The lesion has been considered to partake of fibrosis of lung-tissue, caused by long-continued bronchial congestion. Atheromatous changes have been found in the pulmonary, as well as in the aortic artery, but these, of course, are not characteristic in emphysema. The elastic fibres may not have their outline distinctly marked, and may not curl up as well as usual, but otherwise may offer a healthy aspect; still they may be altered in some way that with our present means of research we are unable to detect. The same remark is true of capillaries which show no evident signs of morbid change. The fact that there is an hereditary tendency to the transmission of emphysema, that it is analogous to gout in this and other particulars, makes one believe that there underlies in most of these cases a special blood dyscrasia, and that mechanical obstacle will not explain them in a satisfactory manner. Malnutrition in the lung is first occasioned, and this leads to dilatation and degeneration of tissue. In cases of emphysema which follow upon bronchitis it is quite possible that severe cough may occasion the dilatation and even the rupture of the air-sacs, but in the numerous instances in which emphysema is the initial condition a morbid change of tissue must have preceded its development. It has been stated that there is hypertrophy of the pulmonary tissue in emphysema, and this affirmation is based on the fact that in the heart and stomach when they become dilated in organic disease they also become thickened. In taking this view it is not considered that in expiration air is not driven from the chest by forcible action, but rather by the normal elasticity of the lungs. There is fair ground for the belief that emphysema is best treated when the therapeutic measures employed are chosen with respect of the chronic constitutional change which exists. The general nature of the affection in its advanced form (lobar) is shown by its insidious progress, its hereditary character, the implication of both lungs in their entire extent, and the effects of remedial measures which are likewise useful in degenerative changes of other organs (heart, kidneys).

Some cases of emphysema arise spontaneously, others follow directly the obstinate cough of bronchitis or certain senile changes. It was usually supposed that localized emphysema was always due to cough, until Louis demonstrated that oppression and difficulty of breathing might come on slowly but surely and without any cough preceding these symptoms. Moreover, bronchitis is not prone to affect those portions of the lungs in which emphysema is particularly developed. The former seats itself in the posterior portion of the lungs or near their base, while the latter affects the anterior margins or the apices. The precise mechanism of the formation of vesicular emphysema is not admitted by all to be similar. Two theories are opposed. The first sustains that forced inspiration dilates and finally breaks through the air-cells; the second holds that forced expiration is the efficient cause of the morbid changes. Laennec conceived, indeed, that it was the retained air which dilated the pulmonary vesicles, and this view he held to because the inspired current was thought by him the more forcible, and therefore the one which could pass through tubes obstructed with viscid mucus, while the expired air was often forced back into the air-sacs and retained there. Unfortunately, it has been shown conclusively that the forced expiratory current is the stronger of the two. Moreover, as the bronchial tubes are cylindrical in form, and as they divide and subdivide, becoming smaller in calibre, a plug of mucus has more difficulty in moving forward than backward. Each time a plug of mucus is drawn into a small bronchus by an inspiratory act, it is again expelled a certain distance by the effort of expiration until finally all the air is driven from a given air-sac, passes alongside the mucus plug and goes out of the lung. An effort of inspiration then occurs, drives the plug back to remain where it becomes fixed, and local atelectasis, and *not emphysema*, is the pathological result.

In further support of this view it should be mentioned that Traube introduced plugs into the circulation which caused collapse of lung-tissue wherever they were transported and left. Never, however, were the collapsed portions of the lungs found near the regions affected with emphysema. Inasmuch as localized emphysema is at times found adjoining collapsed pulmonary tissue, it is presumed by some that a greater quantity of air is drawn into the emphysematous sections, so that they may fill up the cavity left by the portions which have receded from the chest-walls. To admit such a theory would be to assume that under like circumstances the inspired current of air took special directions by direct guidance. This is not true. The inspired air, if it enter in equal quantity into the lungs when there are collapsed portions, may dilate all the open air-sacs equally but cannot expand certain alveoli more than others. Moreover, if collapsed lung-tissue was cause of localized emphysema, it should be found always alongside of it, which has not usually been noted. If we consider the fact that the inspired air, even if forced, rarely causes dilatation or rupture of pulmonary air-sacs in health, it is far less probable that it will occasion this result in disease where it has diminished power. There are certain facts which lend support to the expiratory theory of emphysema. In ordinary expiration air is forced out from every portion of the lungs by pressure of all the chest-walls. In forced expiration after cough the supra-clavicular spaces become bulged and hyper-resonant. This is due doubtless to their minor resistance. Moreover, the margins of the base and the anterior

borders of the lungs are apt to become emphysematous because they are outside of the direct axis of pressure, and besides, contain less air than other portions of the lungs. In forced expiration the diaphragm and thoracic parietes especially contract with force to press the air upward and forward from the bases to the pulmonary apices and anterior borders. It is stated also that the anterior margins become emphysematous because the cartilaginous extremities of the ribs yield somewhat to the forced expiratory current. Certainly in a case of absence of the sternum it was shown that in forcible expiration the anterior borders of the lungs always became prominent through the opening present.

It would appear as if emphysema especially followed those affections, such as pertussis and bronchitis, which are accompanied with violent cough. Pleurisy and pneumonia do not occasion it frequently, because the cough of these diseases is not very intense. These explanations do not apply to lobar emphysema, especially to the cases which develop insidiously and without being preceded by cough. In these examples the tissue of the lungs is morbidly affected and ordinary inspirations are sufficient to cause their expansion. They continue to expand until the resistance of the thoracic walls prevents its continuance. Having lost their elasticity through dilatation, they have not the power to return to their normal volume, and hence remain much distended. We conclude from what precedes that in many essential particulars the pathology, causes, and mechanism of ordinary lobular emphysema and of lobar emphysema differ very much. Among the symptoms which are characteristic of emphysema we should specially emphasize a constant sense of oppression, or difficult breathing. By degrees this increases, until the slightest exertion makes it almost painful to witness. The air is drawn into the chest with a noisy reverberation and is expired slowly, with difficulty and even more pronounced sonorous vibrations than are caused by inspiration. An attack of bronchitis, a large or imperfectly digested meal, emotional excitement, will increase the dyspnœa to a considerable degree. Such patients are usually more tranquil, less suffering in summer than during the cold or damp days of winter. This is not always true, however, and the patient who is here to-day states very positively that he does not experience any relief in warm weather. Too frequently these patients have poor nights; they cannot sleep on account of their difficult breathing. Often they are propped up with several pillows, and even then toward morning they are awakened from a troubled repose by a real asthmatic attack, in which their breathing becomes stertorous, their face, lips, and extremities cyanosed. Their temperature is often lowered one or two degrees, and their hands and feet have an icy feeling. They are particularly troubled with cough and expectoration if an intercurrent attack of bronchitis is present. The cough is often paroxysmal, harsh, ringing. At times their sputa are abundant, of muco-purulent nature. Toward morning particularly they will cough almost continuously, and a large quantity of viscid material is rejected after intense and painful efforts of cough. During the day we see them occasionally when they cough two or three minutes, and only bring up a small quantity of viscid muco-pus after each violent paroxysm. The reason of their difficulty of expectoration is sufficiently explained by the loss of pulmonary elasticity and also of power in the expiratory muscles. Now and then the sputa are slightly tinged with blood which comes from an altered capillary vessel which has given way in their severe efforts. These patients may, or may not, suffer from localized pain in the region of the chest. Usually it is slight and appears to be due to the prolonged coughing-spells. An ordinary site for the pain, if it exist, is at the epigastric region, and is then frequently increased by pressure, or even gentle palpation at this region. We have usually remarked in such cases that there was evident epigastric pulsation which could be accounted for by the hypertrophous dilatation of the right ventricle. When this enlargement of the heart was not present the liver has been enlarged and the localized pain was obviously occasioned by the chronic congestion, or still more considerable organic changes of this viscus. In the lobar form of emphysema the patient, when interrogated, almost invariably replies that he suffers particularly from smothering sensations, and that if he were relieved of these he would feel comparatively well. At his best, however, he always has a certain thirst for air, a certain impression of inability to supply this want. If he attempts to take a full inspiration, his power of breathing into his lungs always falls short somewhat of his desire to gratify his wish—almost his need. At times the face is puffy, sallow, and to such a degree that we are led to suspect chronic disease of the kidneys—still the tint is not that of chronic Bright's disease. It is less pale, not so waxy, nor indeed so much infiltrated. It is more dusky. Sometimes the venous capillaries are markedly engorged and the nose is cold and blue. We suspect cardiac disease, but on auscultation do not find the evidence of it. Although the heart-beats are often distant, muffled, and feeble, especially at the base, it is only occasionally, and in very advanced cases, that we find a mitral regurgitant murmur, or note the pulsations in the veins of the neck, which indicate almost surely the damming back through the tricuspid orifice and the incompetent valvular play at this opening. When the breathing is very rapid and difficult, the alæ of the nose expand with each inspiration; the angles of the mouth are drawn down; the voice is weak, and the whole appearance is one of profound cachexia, and of great physical exhaustion and suffering. In the final stages of this disease, and when the heart has become incompetent by reason of the general venous stagnation, it is not uncommon to find œdematous infiltration of the lower extremities. Indeed, if the liver become enlarged and dense, we have a notable degree of serous effusion into the peritoneal cavity, and increased oppression from the mechanical interference with the descent of the diaphragm during inspiration. The *physical signs* are very numerous and almost pathognomonic.

If the affection exist on both sides, there is considerable bulging of the upper portion of the chest-walls, especially under the clavicle. If the affection is unilateral, the bulging only exists on the diseased side. The supra-clavicular fossæ are sometimes deeper, more excavated than normal. At other times we find them unusually prominent, just as the chest parietes are underneath these bones. The neck appears shorter and thicker than normal. The sterno-mastoid and scaleni muscles are frequently tense, rigid, and stand out like powerful whip-cords on the stretch. The ribs have lost their obliquity in part, and stand out in a marked degree from the chest-walls; the intercostal muscles seem,

and are, more sunken than normal. The entire chest is frequently larger than in health. The movements are peculiar and characteristic. The upper portion does not expand thoroughly, but moves straight up and down in inspiration and expiration. The lower portion of the thoracic parietes may be evidently flattened, and sink in partially with each inspiratory effort. Under these circumstances, the chest is not larger, but rather smaller in circumference at this level than it should be. The back of these patients is often considerably curved in an antero-posterior direction. The shoulders are carried forward. During the night, if they awake with a severe asthmatic attack, their head and shoulders are carried forward, and they lean forward with their elbows and arms resting upon some resisting object, whilst their quick, short inspirations and long-drawn expirations indicate still further the nature of the affection from which they are sufferers. Their abdomen is very prominent, and the movements of this region are much exaggerated.

This is particularly true when the emphysema is generalized. If the emphysema be localized to the upper portions of the lungs, the diaphragm will sometimes be nearly motionless. When the abdominal movements are very marked, and the chest-walls go directly up and down, the appearance arrests the attention immediately. The short, quick inspirations are readily explained by the restricted expansion of the lungs. The long, slow, jerky expirations, accompanied frequently with râles, show the deficient elasticity of the lungs. Although the cough is often loud and ringing, it is also quite as frequently very feeble, and the sputa are expectorated with the greatest difficulty. If there be, under these circumstances, a severe attack of intercurrent acute bronchitis, the danger to the patient's life is very great. The secretions may accumulate to such a degree as to completely fill up the bronchial divisions, a violent paroxysm of cough may be thus occasioned, and during the extreme efforts to throw off the viscid and profuse phlegm from the lungs the patient may be rapidly exhausted, and succumb from apnœa thus occasioned.

If we recur to our physical methods of exploration, we readily recognize signs which, taken together, give indubitable evidence of the existence of emphysema. Percussion of the chest anteriorly, and more especially in its upper portion, reveals marked hyper-resonance. This exaggerated sound is usually found also over the præcordial region. When it is not present here it sometimes points to the fact that adhesions have formed between the layers of the pleura, thus restricting the expansion of the pulmonary air-sacs at this level and preventing the overlapping of the heart by the lungs. The apex-beat cannot in advanced cases be recognized by mere inspection, and at times palpation, even at this level, remains negative in its revelations. Over and beneath the ensiform cartilage we recognize more or less marked epigastric pulsations. They may, indeed, be quite forcible. In place of resonance, dulness exists at this region. Even though the heart-sounds are heard with distinctness over the lower portions of the sternum, the pulse may be quite feeble and depressible. In the mitral area the heart-beats are feeble and obscure. At the base they are at times distinguished with difficulty, and are invariably more distant than they should be. Whenever the heart-beats, both at the apex and the base, are scarcely audible, it shows that the heart has been pushed directly backward. When the dulness is pronounced in the lower sternal region and the epigastric pulsations are exaggerated, it shows that the heart has been carried to the right of its normal position in the chest, or, indeed, that already there is present some hypertrophous dilatation of the right ventricle. The respiratory sounds are characteristic. The inspiration is short and feeble, the expiration prolonged and noisy. Sometimes the respiration is very feeble.

In this weakness of the respiratory sounds we have a valuable sign of emphysema, even though percussion does not as yet reveal any appreciable degree of hyper-resonance. Occasionally, and when the posterior portions of the lungs near the bases are affected with emphysema, exaggerated resonance is carried further down the back than is met with in healthy patients. A dry râle, somewhat resembling the crepitant, has been described by Laennec as existing in emphysema. Without doubt such a râle at times exists, but it cannot be readily separated from a small sub-crepitant which we frequently hear in bronchitis.

Most all the symptoms, signs, and sequelæ of emphysema are clearly explained when we are already familiar with the pathology of the disease. On account of the limited amount of air which enters the chest, inspiration is short and feeble. On account of the loss of pulmonary elasticity in the lungs and the numerous perforations of the walls of the air-sacs, there are many side-currents, and expiration is prolonged and noisy. There is but a slight difference in the size of the chest when we compare it at the end of inspiration and of expiration. Moreover, there is small latitude of more considerable expansion, for so soon as the patient makes, through exercise, a greater call upon the activity of his lungs, immediately marked dyspnœa is produced. This is explained by the diminished area of aërification of the blood, owing to the different perforations which exist in the walls of the air-sacs. Besides imperfect respiration, there is imperfect circulation. At first the circulation is interfered with by the lung changes, afterward, owing to the absorption or rupture of the capillaries, the lungs are anæmic, their nutrition endangered, and for these reasons their liability to acute inflammation (pneumonia) becomes much less. The temperature in emphysema is lowered, owing to the deficient amount of blood in the arterial circulation, and also to the more limited area of lung in which the blood is oxygenated. The general aspect of these patients is marked by pallor, torpidity, and dulness. All these symptoms indicate the diminished aëration of the blood and show the special liabilities of this disease in regard to complications and sequelæ. It is infrequent for emphysema to last any considerable time without being complicated with bronchitis. This bronchitis is not, as a rule, of the inflammatory, but rather of the congestive type. Quite rapidly sputa are formed which are frothy or purulent in character, and fill, to a great degree, the entire bronchial tree. They are thrown off with much difficulty, and occasionally the patient runs a risk, and an imminent one, of dying from apnœa.

At the autopsy the mucous membrane of the bronchial tubes is not always very red, but, on the contrary, shows a tendency to anæmia. This is especially evident in the larger divisions, and when the attacks of bronchitis have been frequent. In the intercurrent attacks of bronchitis, if they be of severe type, unless they are properly and speedily cared for, the tendency to become graver is very obvious.

If the patient die, the bronchi are discovered to be full of spumous or purulent sputa, and fibrinous coagula obstruct the pulmonary arteries and the right side of the heart. Death is manifestly due, therefore, to these combined conditions. During life we can occasionally observe a heart in which the pulsations are rapid and forcible, and yet the pulse remains weak and depressible. In such examples, coagula are frequently found, and the post-mortem examination confirms the belief adhered to during life. Of course, when the dyspnœa is intense during life, we have occasion to remark the anxious countenance, the cyanosed lips and extremities, the cold hands, the short, quick inspirations, and the long, labored expiratory efforts. The breathing is noisy, and expectoration is accomplished with great difficulty. From time to time the permanent interference with aërification is rendered more painful still by repeated paroxysms of cough, accompanied with intense oppression. These are, indeed, real asthmatic attacks. They are more frequent at night than during the day, and are apparently due to the greater congestion of the bronchial mucous membrane which exists at this time. The congestion itself is brought on by the recumbent position and the relative inactivity of respiration during sleep. Finally, a spasm of the bronchial tubes is produced, owing to the reflex irritation, and the patient's condition is for a while more serious. The frequent repetition of these attacks is apt to occasion increase of the muscular layer around the bronchi. When emphysema has been of long duration it is accompanied by organic change of the cardiac structure. The walls become thickened and the cavities enlarged. There is hypertrophous dilatation of either ventricle accompanied or not by valvular incompetency. Owing to the obstructed circulation in the pulmonary arteries the right heart has more that its share of work to do, and whilst it may struggle to overcome the obstacle to its efficient action, it finally yields to backward pressure, and tricuspid regurgitation is thus effected. When the general venous system is stagnant, œdema of the lower extremities and effusion into the abdominal cavity sometimes become manifest. The left ventricle is also involved in the pathological process. By reason of being pushed over toward the right by the left lung, the axis of the ventricle does not correspond with that of the aorta. Hence the efficient contractions of its muscular walls are in a measure prevented. Moreover, from the stagnation of the blood in the general venous system there is another considerable obstacle to be overcome, and, in consequence, the evident forcible cardiac systoles are not revealed by a corresponding strong pulse. Besides being weak, the radial pulsations are small. This, too, is easily accounted for by the insufficient supply of blood which flows into the left ventricle from the lungs and by the large amount of it which constantly remains in the veins throughout the body. Emphysema finally affects the general nutrition of the whole organism. The patients become very thin, the body wastes, fat disappears, the muscles are found to be small and flabby; the face is pale, puffy and sallow. To look at it we might suspect the existence of chronic renal disorder.

We should not regard the disease as trivial, although remedies sometimes occasion decided beneficial results. The primary indication is to avoid the accidents which can either develop complications or augment the existing bad symptoms. In this way alone can a life for several years of comparative comfort be anticipated. Cases are occasionally seen in which extravasated air which started at the root of the lung has extended itself to the mediastinum, the neck and cellular tissue of the trunk. Such a condition is serious, although capable of cure in many instances. Emphysema is more serious in adult life than among old people, because they have greater need of the respiratory function, and at the former period, on account of the amount of blood in circulation, there is more probability of an attack of severe bronchitis. Emphysema often accompanies pulmonary phthisis. It is then found between the lobes or in the interior of the lungs. According to Waters we may find tubercles in the emphysematous lobules. In phthisis emphysema is due to the severity of the cough. Pleuritic adhesions may exist over the surface of the lung and prevent the underlying vesicles from dilating. It is somewhat rare to find pleuritic adhesions in emphysema if it be generalized. In the *treatment* it is essential to consider, first, the treatment of the disease itself and then that of its complications or the affections which depend on it. To those who are of opinion that emphysema is mainly occasioned by *bronchitis*, and that this affection is, when present, a constant menacing source of further injury to pulmonary structure, the primary indication is to avoid or cure the bronchial attack. To do this we shall, of course, be obliged to consider climatic conditions, telling our patient to go South in the winter, and duly to come North with the spring when already well advanced, and to take such medicinal preparations as are most suitable to subdue, if not wholly cure the cough, at the time when it becomes an annoyance, or even a great suffering.

To persons who look upon vesicular emphysema as a *dyscrasic affection*, under the influence of certain constitutional tendencies, such treatment is not sufficient. We must do for the patients thus affected what we do for those suffering from analogous diseases—such as Bright's disease, or fatty degeneration of the heart. Of course, we appreciate, when the disease is far advanced and there is already present not only perforations of air-cells in different points, but even rupture and almost complete disintegration of tissue, that we can effect very little by the use of any remedy. But when we have a case at an earlier stage in which there is merely loss of elasticity in the air sacs we can be of unquestionable service. The remedy which is followed by the greatest benefit, especially when it is given during a long period of time, is iron. The form in which iron is exhibited is not essential. The tincture, the sulphate, the carbonate, all are good and may be varied in accordance with some individual peculiarity of the patient, or the habit of the practitioner. According to Waters, it would appear that the tincture of the acetate (Br. Ph.) in ten- to twenty-minim doses largely diluted with water is specially efficacious in those instances of emphysema where there is accompanying bronchitis.

While iron is being given careful attention should also be directed to diet and regimen. Formerly it was thought there was real paralysis of the bronchial tubes, and in view of this condition strychnine was prescribed. Never, however, has it been of decided advantage, nor is this to be wondered at since we know that the condition, formerly considered as paralysis, is indeed a condition of spasm. But the spasmodic affection of the bronchial divisions is not a primary one, but is secondary to the emphysema.

Breathing compressed air has been highly recommended by many writers on this disease, principally among the Germans. It may be of temporary use and give great relief for a time, but soon its advantages are less apparent and we should not expect from its continuance any durable results.

The diet of the patient must be nutritious and easily assimilable. It is not desirable, however, to give such a quantity or kind of food as notably to increase the amount of blood. Aërification is not sufficient always for the blood which is present, and any increase of it in bulk would necessitate greater power of oxygenation than the patient could exert without augmenting his dyspnœa. The dyspnœa in such case would be occasioned by more frequent respiratory efforts. The main object under this head to hold in view is the necessity of securing for the patient through proper care a blood of *good quality*.

If these patients be attacked with acute bronchitis we should be chary of the use of many of the anodyne or depressing cough-mixtures. The component parts of such a mixture should be ether, ammonia, and squills. Alcohol should be given in moderate and quite frequently repeated doses, particularly if the pulse be feeble and rapid. Very soon we shall perceive its good effects, for the patient will become less anxious and oppressed. Counter-irritation of the chest-walls by means of mustard-poultices, tincture of iodine, or turpentine stupes is not to be lost sight of as a valuable adjunct to treatment. When you order a mustard poultice be careful *not* to have it made with too large a proportion of mustard, first, because it would irritate the skin at the time too rapidly, and hence not produce the good results we wish to obtain from its application, and second, because if the chest-walls be rendered red and sore from mustard we cannot afterward use any other method of counter-irritation during one or more days without causing an undue amount of suffering to the patient. What is most to be desired in these and similar cases, is a continuous slight irritation of the cutaneous surface. The blood must be drawn away as far as may be in this manner from the internal viscera, and also stimulated in its onward flow by what there is of reflex stimulus through peripheral nerve-fibres. If turpentine be employed, I know of no better preparation for external use than that of Stokes' liniment, in which there is a certain amount of acetic acid, the whole emulsified by means of yolk of egg. The vapor which rises from the turpentine liniment is, I am satisfied, of value from its local action upon the mucous membrane lining the bronchial tubes. Whenever there is more or less sanguineous expectoration, it doubtless tends to arrest it by its styptic influence. Tincture of iodine is not so useful an application as the ointment of iodine, as it very soon hardens the skin, makes it tough, more or less parchment-like, and probably incapable of absorption.

The ointment, on account of the grease which enters largely into its composition, and the absence of alcohol, keeps the tissues softer for a longer period, and probably benefits the patient not only by its irritant quality, but also by its resorbent action. At times a more powerful local irritation is required. This may be accomplished by dry cupping, a thapsia plaster, croton-oil paint, or fly-blisters. The croton-oil paint, known as Corson's paint, is usually to be preferred. The proportions are as follows: one drachm of croton oil, one drachm of sulphuric ether, five drachms of tincture of iodine.

This may be painted over a limited area of the chest-walls with a camel's-hair brush. In eight or ten hours afterward a myriad of little miliary vesicles with a red, inflamed base, will occupy the region which has been covered with the paint. These vesicles are sometimes accompanied by severe, harassing itching, which may be relieved by local applications of sweet oil, or glycerine and water. Care should be taken not to bring the fingers into contact with the eyes or face after using this pigment, as a red blotch, or still more irritation might thus be occasioned. Washing the hands will of course be the proper precaution to take so as to avoid a like possibility.

Many of these remarks seem almost infantile, gentlemen, until a little experience in actual practice makes you appreciate that even they are not unworthy of a passing consideration.

With these patients it is important to move their bowels every few days by means of extract of colocynth and rhubarb, rhubarb, aloes, and mercury, or some other equally effective laxative or mildly purgative combination. Too often all the means indicated fail to help your patient, and his condition grows steadily worse, sometimes by slow degrees, sometimes with a more rapid march. Now is your time to make use of turpentine internally. You may give it in the form of gelatine globules, or French "perles" as they are called, and in this way all the disagreeable or unpalatable properties of the medicine are lost sight of. You may give it in a more assimilable form, perhaps, as an emulsion, with gum and some aromatic water, like fennel, cinnamon, or peppermint. A formula I frequently use is this:

℞. Olei terebinthinæ..... ʒ ij.
Syrupi acaciæ..... ℥ j.
Aquæ cinnamomi.....ad. ʒ iv.
M. S.—A dessertspoonful every three hours.

The proportion in the above of the oil of turpentine may of course be increased, and much larger doses of it be given. This I can scarcely advise as a rule, since I have remarked by actual experience that larger doses do not answer our purpose so well. Frequently they are followed within twenty-four or forty-eight hours by symptoms of very painful dysuria, that the medicine has to be greatly lessened in amount, or its exhibition completely suspended for a time. I have known quite abundant hæmaturia to be occasioned by drachm doses given every four hours. The good effects of small doses of turpentine in generalized vesicular emphysema are sometimes very remarkable, and that too, in a few days. I have known patients who were breathing noisily and laboriously, whose pulse was feeble and rapid, whose extremities were cold and cyanosed, whose chest was filled with moist and sonorous râles, return after a few days' trial of it and report the most evident improvement.

Normal heat had returned to their extremities, the cardiac pulsations were slower and stronger, the power of expectoration was greatly increased, the quantity of the sputa was diminished, and the chest was freer of its obstructive fluids, as shown by auscultation and by the audible and visible relative quiet breathing.

But this glowing account is by no means always true. Some patients get no benefit from the use of the turpentine. In these I have been led to believe either that the changes of the walls of the air-sacs have already passed beyond the limit of possible great benefit, or that the heart-walls are al-

ready degenerated. To test this matter thoroughly, and especially where we are in great doubt as to the precise condition of the muscular tissue of the heart, I give frequent small doses of tincture of digitalis, combined with some stimulating expectorant, or by itself. In a day or two we may notice the good effects. The heart may gain strength little by little, and the ability to throw off the viscid and foamy sputa which stifles the patient may be greatly increased. Now and then even cardiac stimulation seems utterly to fail of good effects. Then, gentlemen, is your time, if ever, to try what you can obtain from an emetic dose of powdered ipecac. Give it in ten-grain doses, and repeat once or twice every ten or fifteen minutes, until free emesis is produced. Make the patient drink freely of tepid water between each successive dose of the ipecac, and if much depressed after vomiting, give two ounces of hot whiskey or brandy in the form of a strong toddy.

I have seen more than one patient who appeared to be literally in the jaws of death dragged forcibly out of them by the adoption of what seemingly is an heroic method of treatment, but which in reality is one of the best with which I am familiar.

What, indeed, do we fear in these cases? Apnœa, and an apnœa which is inevitable if the bronchial tubes be allowed to become more and more choked up with viscid or spumous sputa, or both combined, so that the function of hæmatosis is almost completely abolished.

Expectorants, stimulants, heart tonics are no longer of any use. We must literally galvanize the peripheral fibres of the pneumogastrics in the only way it can be done effectually, and that is by the immediate use of an emetic. Be careful of one thing, however, to use an emetic which is not followed by depressing effects, and for this reason, if for no other, tartar emetic should never be either counselled or employed.

Among other disastrous consequences which might proceed directly from such an ill-advised course would be the formation of intra-cardiac or intra-pulmonary fibrinous coagula. I need not add that rapid, or even sudden death, would be an almost necessary consequence of these products. In the event of vesicular emphysema being accompanied by persistent chronic bronchitis, we must still make use of the stimulating expectorants already mentioned, but we shall also find advantage, in certain instances, in giving ten- to fifteen-minim doses of oleoresin of cubebs, or one or two capsules of copaiba every four to six hours. The bronchial mucous membrane will be thus modified and secretion diminished. If the general tone of the system is under par, it must be raised up by iron, quinine, and nux vomica. In this way doubtless we get the better of certain cases, which otherwise would resist indefinitely all usual methods of treatment.

In a preceding lecture I have pointed out that essential asthma is a rare affection; that ordinarily we can trace its connection with some preceding organic change in the lungs, or in the heart. Of these none, perhaps, are met with so often as vesicular emphysema. Therefore, it is that sometimes turpentine, cubebs, counter-irritation, tincture of the acetate, or some other form of iron, will relieve asthmatic attacks when the antispasmodic remedies so frequently indicated will fail to produce desirable effects. Yet we should not throw aside too completely the use of so-called anti-asthmatics like stramonium and belladonna leaves, nitre paper, tincture of lobelia, and the like. If, after ignition, smoke of the former be inhaled, or the latter be taken in proper doses before retiring at night, they will frequently prevent an otherwise imminent attack. In very low conditions, where the vital forces are at a complete ebb and where food and drink, except in the smallest quantities, are taken with difficulty, I know of nothing in the way of a general stimulant equal to strong black coffee, with about one-third old brandy. Some physicians believe such a mixture may be given during the day-time with advantage, but not at night, because they fear it will prevent sleep, and thus take from the patient one of his most reliable restorers. This is not true, for many times when the blood is stagnating in the brain and a condition of wakefulness is in a measure continued by its presence, black coffee will not only break up the spasmodic closure of the bronchial tubes, give renewed vitality to the general system, but also actually cause sleep by its stimulating action upon the cardiac contractility and the direct influence upon the activity of the cerebral circulation.

Original Communications.

THE HISTORIES OF SOME UNUSUAL CASES OF LABOR,

TAKEN FROM THE OBSTETRIC RECORDS OF

EDWARD L. PARTRIDGE, M.D.,

INSTRUCTOR IN OBSTETRICS, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK; ATTENDING PHYSICIAN, NURSERY AND CHILD'S HOSPITAL; ATTENDING OBSTETRICIAN, NEW YORK INFANT ASYLUM; ATTENDING GYNECOLOGIST, OUT-PATIENT DEPARTMENT, NEW YORK HOSPITAL; FELLOW OF THE NEW YORK OBSTETRICAL SOCIETY.

I.—*Twins—Hemorrhage from partially detached placenta before birth of second child—Ante-partum hour-glass contraction—Version.*—Mrs. K——, aged thirty, was delivered on August 5, 1881. The pregnancy was the sixth, two preceding ones having resulted in miscarriage. Nothing abnormal occurred in connection with previous labors. This delivery took place at term. After a stage of dilatation, lasting twelve hours, a child wrs born, which presented by the vertex. Within a few moments an alarming hemorrhage took place, and I was summoned by her attendant.

I found a large amount of blood in the bed, the flooding still continuing. The abdomen happening to be uncovered, I observed some peculiarity in its shape, in that a large-sized, firm tumor was present quite high up, and chiefly on the right side, while from the lower border of this enlargement downward to the pubes, the uterus was less defined and less firm.

My hand passing upward from the vagina entered a cavity, which proved to be the lower segment of the uterus, filled with clotted blood, and containing also a placenta three-fourths separated from its attachment. After scooping out clot after clot I was able to recognize that the partially detached placenta was situated on the right side of the uterus below its middle. Introducing my arm still farther, I distinguished another child packed, as it were, into the right upper corner of the uterus, and at once recognized an obliquely situated constriction of the uterus separating that portion which contained the second child from the flaccid lower cavity. I was able to pass my fingers through the ring and

touch the child's side and abdomen, feeling the lower extremities lying against the latter. Thinking delivery of this child to be an easy matter, I was surprised to find that traction upon a foot effected no change in its position.

Feeling that the danger from hemorrhage from the lower segment of the uterus—with its partially detached placenta—to be extreme, I applied, for the next ten minutes, as powerful and varied traction as I was capable of, for the purpose of dislodging the child. It availed nothing, producing *absolutely no* change in the relation of the parts. Finally catching both feet between my fingers, and pulling violently downward, they engaged in the constriction, and strong traction completed delivery. Full chloroform anæsthesia by Dr. F. W. Merriam had been kept up during my efforts. Both placentæ followed birth of second child, subsequent examination showing them to be distinct and separated by a broad space of intervening membrane.

The children, which were males, and large for twins, were dead—the death of the second, I think, resulting from the tetanic spasm of the upper corner of the uterus.

The exsanguination and exhaustion of the patient were very great, and her recovery of strength was slow. Even this termination was fortunate as compared with results in many similar cases.

In the *American Journal of Obstetrics* for April, 1882, Dr. T. C. Smith, of Washington, has made a study of thirty-three cases of antepartum hour-glass contraction of the uterus. The forceps proved of no value in meeting the difficulty, and so serious was the dystocia that craniotomy was performed in no less than ten cases. Anæsthetics and opium accomplished but little, and of the thirty women who were the subjects of the thirty-three labors, eight died, while the mortality among the children was twenty-five.

II.—*Pulmonary congestion and œdema from organic heart disease, complicating pregnancy and labor.* —Mrs. R——, aged twenty-six, was first seen by me in November, 1881, when about six months advanced in her first pregnancy. Her previous health was always good, she had never had rheumatism or scarlet fever, nor was she conscious of any cardiac disease, though she had suffered at times, beginning two years before, from palpitation of the heart. This symptom had never been sufficiently severe to lead her to consult a physician. My first visit upon her was owing to an attack of dyspnœa. She was expectorating frothy, bloody mucus in moderate quantity, and the ear to the chest discovered abundant fine mucous râles, chiefly on the left side, with slight dulness. Digitalis and stimulants relieved her after a few hours.

Subsequently a satisfactory examination of the heart, when pulmonary œdema was absent, disclosed a loud mitral regurgitant, and a very distinct presystolic murmur. There was in addition a marked purring thrill over the apex region of the heart. The apex-beat was in the seventh intercostal space on a line with the nipple.

In January she had a similar attack, not differing essentially as regards symptoms or severity. Her condition was markedly anæmic, the renal function being properly performed.

On March 3d (the proper time for term-labor), at 2 A.M., slight but regular labor-pains began. An hour later she was seized with a severe attack of œdema of the lungs.

On my arrival, I found the patient with pulse of 120, upright in a chair, with much difficulty of respiration. Expectoration characteristic—profuse and bloody. Fine and coarse râles were abundant over both lungs. The cervix admitted one finger, regular uterine contractions being present. The first stage of labor lasted eight hours, and the second an hour and a half, the child being born at noon: presentation and position normal.

The pulmonary œdema continued throughout. Digitalis, stimulants, and dry cups were in constant use, with care to maintain a proper surrounding temperature. An amelioration of the cough and expectoration could be obtained from time to time, yet the pulse could never be brought lower than 120, and it continued at that rate for four hours after completion of delivery.

At no time, from the beginning of labor until eight hours thereafter, was the expectoration of bloody mucus absent. There would be intervals of half or three-quarters of an hour, occurring every two or three hours, when the secretion would be considerably diminished.

The patient being unable to lie down, or even take a semi-recumbent position, two wooden chairs were placed with sufficient space between them to allow of the passage of the child, and its birth took place with the patient in the upright position. The labor was natural, the child being of average size. The second stage would have been of less length if she had not been directed to abstain, as far as possible, from voluntary effort.

After delivery of the placenta she was placed in the sitting posture in bed, it being, of course, impossible to apply a bandage, and it was after nine o'clock in the evening that her pulmonary embarrassment was sufficiently removed to permit her to lie down. The unusual manner of delivery did not bring about an undue loss of blood nor syncope.

On March 4th her pulse was 100; cough still present, expectoration having ceased. She had been able to sleep some. Convalescence was normal from this time. Contrary to my advice, she nursed her child.

Six months later she was looking very well, having gained in weight, though still nursing her child. She had experienced no cardiac symptoms beyond occasional hurried respiration upon the exertion of fast walking.

The case is of interest chiefly because of its unusual clinical features. It serves also to illustrate the increased liability to pulmonary œdema when chloro-anæmia exists, the latter, with hyperinosis, being the usual concomitant of pregnancy.

Another thought which occurs to one, is the great embarrassment to which the operator would have been exposed had the case called for forceps or version.

III.—*Forceps delivery, and physometra.* — Mrs. O——, aged thirty-three, had been married twice—to her first husband, twelve, to the second, two years. In general she had good health, never having uterine disease to her knowledge. Ten years ago she acquired syphilis, though for several years there had been no active manifestation. She felt well during pregnancy, and stated that she felt the movements of the child up to the commencement of labor.

Her labor began at 1 P.M., September 6th, terminating September 8th, 3 P.M., the unusual length depending upon a prolonged first stage.

The early uterine contractions were short and inefficient, though regular. No fetal heart could be heard. After twelve hours had elapsed, the os was

as large as a half dollar and the membranes then ruptured, the liquor amnii being small in amount, dark colored, containing vernix caseosa and macerated epidermis. The os had a rounded and very thick margin. Digital dilatation of the cervix was then attempted with but slight benefit, owing to its rigidity. The pains had less force and frequency, so that I desisted from these efforts.

During the next eighteen hours, there was no improvement in the uterine action. Morphine secured some sleep for the patient, but did not assist in relaxing the cervix, there being no element of spasm in its rigidity. At this time another attempt was made with the fingers to dilate the os and excite uterine activity. It was soon apparent that such forcible manipulations would be necessary that the integrity of the cervix would be endangered.

On September 8th the pains became stronger, though still very short. Dilatation took place from the jamming of the head into the cervix. This more readily resulted as the head was very compressible, there being ample signs of advanced decomposition. The anterior lip of the cervix became greatly œdematous, which may be explained, perhaps, on the theory of Professor King, for the patient insisted upon keeping the dorsal position and the anterior lip was consequently directed forward, being compressed between the pubic bones and the head of the child. Finally, in the afternoon, short forceps without handles easily delivered the head, which was well descended; no chloroform being given, nor the patient's position in the bed changed.

Immediately upon the birth of the child, a large amount of foul gas was discharged from the uterus with a succession of loud reports. The liquor amnii which had remained behind the child contained most foul-smelling, decomposing cuticle and vernix caseosa.

The placenta not following for some time, it was removed manually without difficulty, though still attached to the fundus. There was no hemorrhage. The child was far advanced in putrefactive changes. At no time did the lochial discharge become offensive, and convalescence was normal. Disinfectant injections were freely used. Two weeks after labor the cervix was examined and found to be without laceration.

I am inclined to believe that during the manipulations attending the attempts to dilate the cervix, a small amount of air found its way into the uterus, the membranes being ruptured. The contents of the uterus were already in a condition favorable to, and the amount of time amply sufficient for, the development of the gases produced by decomposition.

Lest it might be thought that the discharge of gas came from the rectum and was erroneously attributed to the vagina, I would add that when pressure was made upon the uterus previous to the delivery of the placenta, I saw the separation and movements of the vulva incidental to a noisy escape of some of the gas.

IV.—*Forceps delivery—Posterior position of the occiput—Fracture of child's humerus.*—Mrs. K——, aged thirty-eight, had her first child at the age of thirty-seven, after a difficult instrumental delivery. Her second labor occurred May 24, 1878, at term. I was called at 5 A.M. (this being my first attendance upon her), and found the os well dilated, the head presenting in the L. O. P. position. She was a short, thick-set woman, with a pelvis small in all its diameters, most markedly shortened antero-posteriorly at the outlet—a condition readily permitted by her child-bearing so late in life. The size of the uterine tumor was unusually large.

At 5.30 A.M., the head was well engaged and the os widely dilated. The pains were excellent, the patient aiding much by voluntary efforts. The head did not advance nor show any disposition to perform anterior rotation, manual efforts to bring the occiput anterior being without benefit.

The head was well flexed.

Two hours later I applied the forceps, and after forcible traction delivered the head, the occiput emerging posteriorly.

Progress was now interrupted owing to obstruction to the passage of the shoulders, the right one impinging above and against the pubis. Uterine action was vigorous, and almost immediately the child's face became purple. Exercising as much caution as possible to avoid injury to the perineum, I employed every variety of tractive and manipulative method during the next five minutes, without any effect, though the uterus was aided and stimulated by strong pressure upon the fundus. Finally, having lodged my finger firmly in the axilla of the left arm, I made most forcible, continued traction downward and slightly backward. The effect of this was to disengage the shoulders and they were at once expelled, though only upon strong traction. This was not all that I accomplished, however, for my finger recognized the sensation caused by a breaking bone.

The first result of the finger in the axilla was to throw the child's elbow away from its side, and when the elbow was thus brought against the pelvis, the downward traction produced a fracture of the humerus at the junction of its upper and middle thirds. The child was of large size.

Delivery occurred at eight in the morning, and in the afternoon of the same day I applied a plaster-of-Paris splint. Forty-eight hours after birth, abundant callus was present. The splint was removed in three weeks, though at the end of seventeen days firm union seemed to exist.

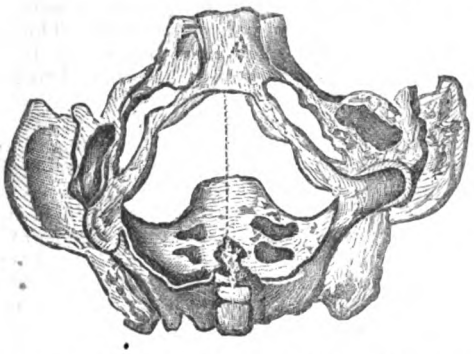
The child is now in its fifth year, the development of the extremity has been perfect, and nothing would indicate to the careful examiner that any injury had ever occurred.

This history does not differ from those common to such injury except that usually fracture of the humerus takes place during attempts to bring down an arm in breech cases.

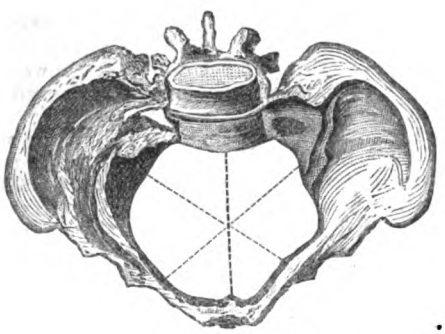
V.—*Deformed pelvis—Induction of premature labor on three occasions.*—Mrs. K——, aged twenty-six, was first seen by me in her third confinement in March, 1877. I then assisted Dr. J. W. Wright in the management of her delivery, he having been engaged by her without receiving any detailed previous history of her case. Her labor was exceedingly difficult, occurring at term. The dystocia resulted from an imperfectly developed left half of the pelvis, as indicated in the diagrams on next page. The presentation was L. O. A., the parturient forces being normal. The stage of dilatation was short. The head being engaged, the posterior fontanelle could not be reached, the anterior one was touched with difficulty, the sagittal suture was crowded far over to the mother's right side, and the *left* parietal bone lay within the circle of the os. The fœtal heart was strong.

After an hour and a half, no descent being made, the forceps was used. Half an hour of very firm traction was required to bring the head to the pe-

rineum, the instrument being once re-applied. As the head descended, it rotated into the *left* oblique diameter, which was the longer, finally presenting



in the R. O. A. position. The child, which weighed nine pounds, lost its life from compression of the cranium during delivery. Convalescence was good, there being no pain or loss of power in the right



leg, nor any necessity for employment of the catheter. There was a numb sensation present in the right leg for two weeks.

Information, meanwhile, was obtained from her as follows. Six years before, after a prolonged labor, she was delivered of her first child, which weighed four pounds and lived a short time. Four years before, her second child was still-born, dying in the birth. Labor continued sixty hours. After the first labor, her right leg was paralyzed for six weeks; after the second the same leg was similarly affected for three months. The catheter had to be used for a long time after both labors. When a child she sustained "an injury about the left hip" which caused her to be lame for some time.

The occurrence of the paralysis in the *right* leg is readily explained by a crowding of the head against the sacral nerves of that side. The pelvic deformity was of that character which results from an anchylosis of the sacro-iliac synchondrosis during childhood, and is attended by a partial arrest of development in the corresponding half of the pelvis.

The *fourth* pregnancy of this patient dated from menstruation occurring May 18 to 23, 1878. Pregnancy was natural and term labor would have occurred about February 22d. By my advice she submitted to the induction of labor on February 1st. Barnes's dilators effected dilatation of the cervix, and by the time of its accomplishment regular and frequent uterine contractions were excited. The position was R. O. A. The pains were not expulsive and after a delay of two hours I applied the forceps. Delivery was not difficult, though considerable traction was required. The child was vigorous, and at the date of this report is well and strong. Convalescence normal. While nursing this child she again became pregnant, the last menstruation occurring April 30th to May 4th.

On January 15th, three weeks before term, I again induced labor, Dr. J. West Roosevelt aiding me. Fetal heart and movements were strong. The first examination showed the os, admitting two fingers, and the *head, readily perceived, presenting.* Palpation demonstrated the breech in the right hypochondrium, while the head could be taken between the fingers just above and a little to the left of the pubes. In an hour the largest dilator had completed its work, and the head was again noticed presenting. Some trifling pains were present. Three-quarters of an hour later, on looking incidentally at the abdomen, its appearance was found entirely changed. The head could not be distinguished above the pubes, and there was no long axis to the uterus, its outline being circular. Suspecting a change of presentation, I examined and found the *left foot presenting*, the right being detected on a little higher plane. The pains improved, and at 11.15 I ruptured the membranes. The descent of the child was gradual, the arms were brought down with great difficulty, owing to the narrowed pelvic diameters, while the head became caught at the *brim* of the pelvis. For a moment or two manual efforts were unsuccessfully employed to deliver the latter, then Elliot's long forceps was applied. Five minutes of powerful traction were required before delivery.

The child did not survive, there being no action of the heart at birth, or during half an hour occupied by measures undertaken for resuscitation. The child was slightly larger than the last, yet if it had presented by the head I am confident that it would have lived. The mother did well, having no unnatural sensations about the right leg.

This delivery, let me repeat, occurred on January 15, 1880.

On February 5th and 6th she had a discharge, which she thought to be menstrual. She experienced quickening July 23d. It seemed so highly improbable, if not impossible, that she should become pregnant at menstruation in February (three weeks after delivery), and the time of quickening being taken in consideration also, I believed that impregnation took place just preceding the time at which menstruation should have occurred in March. The induction of labor was advised, therefore, for November 20th. Accordingly, on that date—which I thought to be three weeks prior to the time for term labor—the operation was performed. The head presented, the bones of the cranium being noticeably more firm than on either previous occasion. Fetal heart, 148.

The labor occupied two hours, delivery taking place by the aid of Barnes's bags and the forceps, the latter instrument insisting upon rotating as before, so as to bring the blade on the mother's right side on a plane anterior to that occupied by the blade on the left side. Considerable traction was necessary, with slight compression.

The child was strong, well developed, though of less than average size, and is now as healthy as could be desired. Convalescence was normal.

The histories of these three labors illustrate certain of the benefits conferred by induction of premature labor, while they fairly demonstrate the

simplicity and ease of its performance, with reference to the mother.

This patient being kept more or less under the influence of an anæsthetic from the commencement of the measures for her delivery, has no suffering during her child-bearing, and regards the *beginning* of her labor as the *termination* of evils.

13 West Ninth Street.

FOREIGN BODY IN THE AIR-PASSAGES.

Rupture of the Trachea from Cough—Surgical Emphysema—Tracheotomy—Death.

By GEORGE M. LEFFERTS, M.D.,

Clinical Professor of Laryngoscopy and Diseases of the Throat, College of Physicians and Surgeons, New York.

The *résumé* of the history of an unusual and interesting case is given in the above title: it remains but to add the details. The young child, of not more than three years, was brought to me with the story of having, while playing upon the floor, two days previously, placed something that he had picked up in the mouth, which a moment later caused violent cough and strangling. The latter, with its attendant cyanosis, passed away, but the former remained and became progressively more distressing, more or less paroxysmal in character; each attack, according to the mother, seemed as if it would suffocate the child. On the second day a sudden swelling of the neck and face was noticed, and the respiration became labored. At the date of my examination, the little sufferer, wan and exhausted, presented a curious appearance, the tissues anteriorly and laterally over the neck being markedly swollen or bloated, and giving a distinct emphysematous crepitation to the touch. The same condition, in lesser degree, existed over the upper parts of the chest. The respiration was hurried, labored, and slightly stridulous, while the paroxysmal attacks of cough were violent and prolonged. Auscultation of the lungs, rendered difficult by the constantly recurring cough, gave diminished respiratory murmur on both sides, with numerous subcrepitant and a few coarse râles over both bases. An examination of the throat and larynx was negative in its results.

Tracheotomy was at once decided upon, but owing to the objections of the mother, was not allowed by her until the following day, when it was performed by Dr. Satterthwaite.

The child's general and pulmonary conditions were unfavorable. The delay had been prolonged, but the surgical indication was clear and imperative.

The upper third of the trachea having been reached by a dissection that required, on account of the swollen and infiltrated condition of the overlying tissues, all of the surgical skill that it received, a slight hissing of escaping air, and the presence of air-bubbles in the deep layer of fascia adherent to the windpipe, located the point of rupture of the trachea at a little to the left of the median line, at about the point of juncture of its middle and upper thirds. The rings appeared to be intact, and the laceration, therefore, must have been of the tissues between one or more of them, the tube now being opened by an incision extending upward through three or four rings and the cricoid cartilage, and the wound held open by retractors. No evidence of the presence of a foreign body was immediately forthcoming, although a probe was introduced downward into the trachea for a short distance, but a tracheotomy tube being introduced during the resultant paroxysm of cough, it was both heard and felt to ascend the trachea and strike against the tube. This was at once removed, and with the next explosive cough the offending substance was forcibly expelled far out into the room (the lower pear-shaped portion of a common jet earring). The edges of the wound were now brought together by sutures.

The immediate result of the operation was to materially relieve the distressing cough and cause a rapid subsidence of the emphysema. The child died, on the third day, from a broncho-pneumonia.

Remarks.—An interesting point in the history of my case is the definite localization of the point of rupture in the wall of the trachea itself. This I believe to be unusual. As a rule, undoubtedly in such cases as I have described, a weaker structure will give way before a stronger, under the great pressure caused by the powerful expiratory efforts in the form of cough; and Wyatt (*Lancet*, April 15, 1882) is probably right in his explanation of the production of emphysema of the neck and chest in many, perhaps the majority, of cases where it follows violent cough—viz., that the breach through which the air escapes occurs in some small or terminal bronchus, rather than in the trachea itself. In such a case, the air would track along the connective-tissue sheath of the bronchus until it reached the root of the lung; then diffuse itself through the mediastina, passing up out of the thorax into the neck, and downward possibly over the muscles of the chest.

The Appearance of Medicinal Agents in the Bile after Absorption from the Rectum.—Dr. E. Peiper publishes the results of some experiments undertaken by him to determine the passage of certain metallic salts into the bile from the blood. The experiments were made upon dogs with biliary fistulæ, the medicaments being injected in solution into the rectum. The following are the results obtained by him: 1. *Iodide of potassium* was detected in the bile in from six to eight hours after the injection of half a gramme in solution into the rectum. 2. *Salicylate of sodium.* No results were obtained with the injection of half a gramme of this salt, but when three grammes were administered in one dose it was found in the bile within thirty minutes. 3. *Carbolic acid.* As the dogs with biliary fistulæ were too weak to bear even small doses of this substance, the experiments were made upon rabbits, the animals being killed a few hours after the carbolic acid solution was administered. In every case the acid was found in the bile, though in very small quantity. The amount injected was in the different experiments from thirty-five to seventy centigrammes. 4. *Ferrocyanide of potassium* (yellow prussiate of potash) could be detected neither in the bile nor in the urine five hours after the administration of a three-gramme dose. The same negative result obtained with the red prussiate of potash. 5. *Sulpho-cyanate of potassium* was found in the bile three hours after the injection of one gramme in solution.—*Schmidt's Jahrbücher*, August 22, 1882.

A Bon Mot of Arago's.—"What are comets made of?" asked a French lady of the distinguished savant. "Madame, I do not know." "Then what is the use of being an academician?" "Madame, that I may be able to say I do not know."

Progress of Medical Science.

CURATIVE ACTION OF ERYSIPELAS.—According to Dr. Dauchez (*L'Union Médicale*, October 5, 1882) erysipelas may exert a beneficial effect upon a number of diseased tissues by exciting in them a healthy action through active inflammation. It modifies favorably some ulcers, especially phagedenic chancre and lupus. Fungous tumors are destroyed, old suppurations dried up, and elephantiasis cured. This action is indeed rare, yet it is sometimes observed, and the possibility of its occurrence should be borne in mind.

STRANGULATED HERNIA OF THE VERMIFORM APPENDIX.—Dr. E. H. Bennet relates the following case in the *Medical and Surgical Reporter* of October 7, 1882: The patient, a man sixty-four years of age, was suddenly attacked with violent pain in the hypogastric region. Examination revealed the presence of a tumor the size of a hen's egg, hard and painless, in the right groin. The patient had noticed a lump in this region for three years, but it had never given him any trouble. Although it resembled an enlarged gland rather than a hernia, attempts were made to reduce it, but without success. The bowels were confined and could not be acted upon by cathartics or enemata. Vomiting set in and soon became stercoraceous. On the third day an operation was decided upon. When the strangulated portion was reached it was found to oe the free end of the appendix vermiformis. As it was gangrenous it was removed, a ligature being previously passed around the appendix in the healthy portion. At the end of four weeks the wound was healed and the patient made a good recovery.

TO HASTEN THE ACTION OF QUININE.—Dr. Starke, in *Berliner Klin. Wochenschrift*, advises that before swallowing powder or pills of quinine, a weak tartaric acid lemonade be taken. This procedure not only greatly accelerates the solution and absorption of the quinine, rendering its physiological action much more prompt, but also obviates that unpleasant gastric irritation so common after the administration of large doses of this drug.

A PUPILLARY PHENOMENON OBSERVED IN CERTAIN MORBID CONDITIONS IN CHILDHOOD.—Dr. Parrot records in the *Revue de Médecine* for October, 1882, a number of observations made by him in regard to a reflex dilatation of the pupil, occurring in certain pathological conditions in young children. In these affections, dependent or not upon evident lesions of the nervous centres, accompanied or not, by convulsions, but always by coma, if the skin of the epigastrium or of any other part of the body be pinched, there follows a momentary dilatation of the pupil. Among the affections in which this phenomenon is observed are tubercular meningitis, hemorrhage beneath the pia mater, some cases of chronic hydrocephalus, and certain other undefined conditions in which the contents of the cranium are increased out of proportion to its capacity. In other comatose conditions, usually without convulsions, there is no response of the pupils to even violent pinching of the integument. In these cases there may be œdema or marked congestion of the pia mater, but the factor of cerebral compression is absent. From his present observations the author is unable to determine the precise diagnostic or prognostic value of this phenomenon, but he formulates one conclusion, viz.: In a child in a comatose condition, whether there be convulsions or not, if the pupils do not respond to peripheral irritation in the manner indicated, we can exclude meningitis and hemorrhage beneath the pia mater—the child is suffering from asphyxia and his death is imminent.

THE INTESTINAL ORIGIN OF CERTAIN ALKALOIDS FOUND IN THE URINE.—In a previous paper read before the Société de Biologie, Dr. Bouchat announced the discovery by him of certain alkaloids in the urine during the course of infectious diseases, and expressed the opinion that they were vegetable alkaloids originating from the infectious agents rather than any product of the animal-cells. At that time he had found none in normal urine. Since then, however, he has succeeded in determining their presence in the urine in health, but believes that they are elaborated in the alimentary canal by vegetable organisms, the agents of intestinal decomposition. Those diseases, as typhoid fever, which increase intestinal putrefaction, augment proportionately the quantity of alkaloids in the urine; and in proportion as this process is controlled by charcoal or other agents, the alkaloids in the urine are diminished. Hence he concludes that they are generally found in the intestine (though possibly also in the tissues), are absorbed in part by the mucous membrane, and excreted by the kidneys.—*Revue de Médecine*, October, 1882.

THE TOLERANCE OF POISONS.—Prof. Rossbach, from a very extended study of this subject, draws the following conclusions: 1. Tolerance of poisons is established very rapidly (except in nervous and hysterical subjects), and it is thus that at the third or fourth cigar symptoms of tobacco-poisoning cease, and that the quantity of alcohol necessary to produce intoxication increases with its use. When atropine is given to dogs daily, certain symptoms are observed at first which disappear in the course of a few days—such as hyperæsthesia of the skin, trembling of the body, etc. The animals then became as lively and vivacious as unpoisoned animals. 2. The organs of man and of animals become equally habituated to poisons, and in the same organism each organ behaves differently toward these. 3. There are organs which never become habituated to poisons, in the sense that they always behave toward them as at the beginning of the administration. It is thus that morphia, always administered in the same dose, induces sleep for weeks or months; that the smoker, consuming a uniform quantity of tobacco, feels, at the end of years, the same beneficial influence continued. It is the same with tea and coffee. Certain organs are influenced by the use of atropine after long usage as at the commencement—the pupil always dilates, the salivary secretion is diminished. It is precisely those organs which are most impressionable which are least influenced by habitual use of poisons. 4. Nevertheless those organs, by the prolonged use of a poison, remain influenced by it for a period of time which progressively diminishes; hence drunkards, and those addicted to morphine, experience the need of more and more frequent doses of alcohol or of morphia. 5. Another series of organs reacts differently toward the same poison, according as it is administered for the first time or after a lengthened interval. Thus atropine acts at first upon the heart by paralyzing the vagus, while at a later period it

paralyzes the motor nerves and the muscles of that organ. 6. Again, there are organs which become habituated to certain poisons (tobacco, alcohol, morphia), so that after a certain time they present no functional derangement. 7. These propositions are not valid, except where the dose remains the same. When the dose is increased, however slowly, a time comes when the poison again exhibits its action. 8. In an organism accustomed to a certain dose of the poison, a much larger dose acts in the same manner as a small dose on an unhabituated organism. 9. In general, the symptoms of chronic poisoning are extended to more organs and functions than those of acute poisoning. Thus in chronic morphia-poisoning we observe restlessness, insomnia, hyperæsthesia, neuralgia, an exaggeration of reflex movements, anorexia, malaise, vomiting, palpitation, albuminuria, malnutrition; whilst in acute morphinism purely nervous symptoms alone are observed. 10. In man and animals, if the dose of the poison be not continually augmented, but be kept at medium quantity, this amount may be supported with impunity for the rest of life. The proof of this is, that thousands of persons arrive at an advanced age who have taken for long periods tobacco, alcohol, coffee, or opium. 11. If the use of the poison be broken off at the end of a relatively short time—weeks, months, or it may be, in exceptional cases, years—health is restored in the course of a few days. But if the cessation take place after a more considerable period of use of the poison, certain morbid phenomena are observed, such as trembling, acute delirium, intellectual feebleness, and lowness of spirits. If now the use of the poison be recommenced, these symptoms rapidly disappear. 12. There is an epoch at which reparation of tissue is still possible, and one when this is no longer possible. In this last case, there is a notable change in the chemical composition of the substratum of the tissues; and this modification is appreciable by the microscope in certain organs, as, *e.g.*, the liver. 13. In order to explain the effects of chronic poisoning, we may say that the organs are not more impressionable to normal stimuli (carbonic acid, ferments), but only to the poison; failing this, the body is deprived of excitants, and a profound depression of most of the functions is produced. 14. The fact that certain organs end by being no longer impressionable to poisons, is comparable to the immunity which certain organisms enjoy toward certain organized poisons (those of infectious diseases) when once they have been the seat of their action.—*Archiv für die Gesammte Physiologie*, 1882.

The Bacterium of Pemphigus.—M. Paul Gibier has found micro-organisms in the serum which fills the bullæ in acute pemphigus and in the urine of the patients. The parasite is found in chains of rounded elements, which show active movements. It is reproduced by cultivating the serum of the urine. The author has not found it transmitted by contagion, and attempts to propagate it by inoculation have so far failed. The affection is easily cured by the usual anti-parasitic remedies. —*Annales de Dermatologie et de Syphilographie*, No. 2, 1882.

How far may the Alcohols be Used in the Treatment of Pneumonia?—In the treatment of either croupous or catarrhal pneumonia, alcohol must, by all means, be used with caution. There are, for example, cases of pneumonia where the employment of alcohol to prevent paralysis of the heart, not only disturbs the regular course of the disease, but has a directly injurious tendency. This is to be noticed: 1. In all light cases of pneumonia. By this we mean those cases in which the temperature does not rise above 104°, where the dyspnœa is not very great, where the pulse is strong and the pulmonary trouble in general shows no tendency to rapidly increase. The employment of alcohol in such cases can only have a dangerous effect, for through the increased action of the heart more blood is thrown to the lung and the disease is increased. 2. The above treatment of pneumonia is further contra-indicated in people who are otherwise strong and healthy, who have not passed forty-five years of age. In children and young people alcohol exerts no favorable influence on the course of the disease. 3. In those cases of pneumonia where there is a valvular lesion of the heart alcohol is to be avoided; for through the increased action of the heart collapse is sooner to be expected. On the other hand, indications for the alcohol treatment are—1. In those patients in whom there is thought to be a degeneration of the heart-muscle, but when there is no valvular lesion. This is mostly the case in chronic alcohol drinkers, in whom an unexpected paralysis of the heart may occur at any time. 2. In those who have passed fifty years of age, if they possess no heart lesion. 3. In the so-called hypostatic pneumonia where the appeal impulse is in position, for the purpose of supplying the sound as well as the diseased lung with fresh, healthy blood, and to protect the sound parts of the organ from stasis and the diseased part from the further consequences of the stasis which has already occurred. 4. In every pneumonia, if only the heart is not affected with a lesion of the valves, after the crisis has passed, so as through the increased impulse to the circulation to more rapidly promote the absorption of the exudation. 5. Finally, alcohol cannot be avoided without regard to the condition of the heart in persons having a tendency toward collapse, where paralysis of the heart or œdema of the lungs may occur at any moment. When, however, œdema is already present, then alcohol is no longer of use, for by this means will the patient, who is now without hope, be unnecessarily maintained in the death-agony. The thoughtless, unrestricted treatment of every case of pneumonia with alcohol is not only unscientific, but indeed blamable.—*Cincinnati Lancet*, October 21, 1882.

Oxygenated Water as a Dressing for Wounds.—At a recent meeting of the Société de Médecine Pratique, M. Brochin reported some experiments made by MM. Paul Bert and Becquard, on the use of oxygenated water in the wards of M. Péan for the dressing of wounds. Excellent results had been obtained in cases of purulent cystitis, ozæna, and ringworm. It had also been employed internally in uræmia and diabetes with good results. Its use had not been so successful in obtaining union by first intention as carbolized water. M. Jolly drew attention to the fact, that to preserve oxygenated water, it must contain an acid. This is more frequently hydrofluoric acid, otherwise it may decompose with an explosion; that used by MM. Paul Bert and Becquard contained sulphuric acid, a fact not to be lost sight of. A certain amount of oxygen is liberated from this water in the form of ozone, and it is in this way that it acts.—*British Medical Journal*, September 23, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, November 25, 1882.

EXPERT TESTIMONY REGARDING PROFESSIONAL FEES AND SKILLED TREATMENT.

A RECENT decision of Judge Campbell, of the Supreme Court of Michigan, in a suit for the recovery of fees for surgical services, is of much importance to the profession. The action was brought by M. W. Wood, Captain and Assistant Surgeon United States Army. The defendant, as is usual in such cases, made a counter-charge of malpractice. The plaintiff was called to attend the defendant on account of compound complicated fractures of both legs, the result of injuries. The latter were so severe and extensive as to cause the surgeon to advise double amputation. The patient objected to the removal of more than one limb; the other limb was dressed, and in the face of great risk an attempt was made to save it. Happily this attempt was successful to the extent of giving the patient a somewhat crippled extremity. The patient was, however, not satisfied with this unlooked-for result, and not only claimed to prove that the surgeon's judgment was originally at fault, but that his skill was defective in not giving him a perfect leg. Hence, instead of paying for such services the patient sues for damages. It is unnecessary to say that the charges were not sustained, although the usual attempts were made to influence the jury in deciding upon matters which they could not necessarily understand.

The questions on which the controversy appears to have turned were, as stated before, the value of the services and the propriety of the treatment. In regard to the first point, the charges for services were reasonable and just. It was intended, however, to reduce the fee in accordance with the want of skill shown in the subsequent management of the case. Hence, the second point as regards propriety of treatment was necessarily presented.

The ruling of the court completely covers all the considerations in this case, and practically establishes a long hoped-for precedent, by judicially recognizing the principle that physicians alone are competent to testify to the value of a physician's services, and that they alone are qualified to give opinions on methods of treatment.

The decision was as follows:

"There is no presumption of law as to the value of a surgeon's services, nor that a jury can ascertain their value without testimony from persons knowing something about it. Nor has a jury a right to reduce the compensation claimed for such service where undisputed testimony shows it to have been appropriate, and on their own unsupported notions that the treatment adopted should have been different.

"A jury has no right to ignore testimony that has not been discredited, and form independent conclusions, without testimony, on matters that require proof beyond their conjectures or opinions.

"The fact that a surgeon changes a course of treatment adopted by another does not in itself show that the former course of treatment was not proper at the time; nor is the patient's failure to recover perfect soundness of limb in itself evidence of malpractice, nor is the fact that he survived, although he refused to allow a particular course of treatment, evidence that such course might not have been proper under the circumstances.

"The jury in an action for the value of surgical services has no right to find malpractice without testimony from persons who are qualified to give opinions on the method of treatment."—Wood *v.* Barker, filed October 18, 1882, Supreme Court of the State of Michigan, Campbell, J.

A PECULIAR BILL.

THE Vermont Legislature has recently had before it a bill which adds to the studies of common schools physiology and hygiene. Furthermore, these sciences are to be taught in such a way as to "give special prominence to the effects of stimulants and narcotics upon the human system." This bill excited much discussion, as well it might, but it was finally passed by the Senate.

Aside from its railroad judiciary and legislature Vermont is one of our model States, as evidenced by the morality of its people and the bareness of its civil and criminal dockets. It has, also, a most stringent prohibition law. Nevertheless, the State is seized upon by the temperance party as though it were a stronghold of sin, and a particularly proper field for its literary and legislative activities. The present bill is doubtless one of the offshoots of the State temperance agitation.

We highly approve of youths and maidens having some lucid and correct ideas about their livers and

their stomachs. But such knowledge is not easily gained. The study of physiology means also a study of anatomy, which latter must come first. And anatomy, physiology, and hygiene are too advanced and comprehensive studies for common schools. Children, says a medical philosopher, first want to know about the stars—last of all about their bodies. As regards this latter subject, the growing youth are obstinately dull. It is wonderful how even medical students mix things up in attempting to master physiology. It is well, therefore, for educators to know that that science is not an elementary one. The average child gets no clear or rational notions regarding it. This has already been abundantly shown by examination papers. The difficulty is increased by the fact that the teachers themselves know almost nothing of what they are compelled to teach.

Again, a knowledge of physiology does not necessarily make one more prudent in hygienic matters. Witness the doctors. A child should be taught at home those habits that will secure his health. The enforcement of such habits is better than the most learned expositions of the laws of hygiene. With children, as with nations, art comes before science, the act before the reason why. Will a boy refrain from going behind the barn and smoking a cigarette because he has been taught that one drop of nicotine will kill a cat?

With reference to the proposed Vermont law, we fear that a just application of physiological science will not help the cause of teetotalism so much as is hoped. For this science teaches that alcohol in moderation, though dangerous to youth, is only risky to manhood, and may be helpful to age. So, for tobacco; it is, indeed, absolutely pernicious and hurtful to the immature, but not necessarily so to the adult, and no State should allow or compel its teachers to pervert physiological science and accepted hygienic truths to the purposes of ultra reformers.

THE CUTANEOUS DISEASES OF CHILDREN.

Dr. Robert J. Lee recently read a paper upon the "Cutaneous Diseases of Children" before the Medical Society of London. The paper was based upon a clinical experience with about two thousand cases of this kind, and contained some points of practical interest.

Dr. Lee said that children were liable to cutaneous diseases to a larger degree than adults. In the wards of a children's hospital and dispensary, five per cent. will have some form of skin trouble. Children are also peculiarly liable to a certain form of skin disease. This form the writer chose to consider simply as a dermatitis, which affects particularly the scalp, face, and neck. Under this head of dermatitis are included the diseases generally known as strophulus, ecthyma, eczema, and impetigo. In thus using the generic name of dermatitis, Dr. Lee adopts a method which is in accord with the views of many others. It shows, says Dr. Lee, a feeble apprehension of the true spirit in which we should regard the subject of skin diseases to try to find a separate name for every case we see. Every fresh student is appalled at the multiplicity of forms and names associated with eczema; and it at once strikes one as better, where possible, to use a word which implies no specific process other than inflammation.

Dermatitis, as thus understood, of the head, neck, and body, makes up about two-thirds of the cutaneous diseases of children. This disease takes on various forms, and may properly enough be defined as serous, scaly or epithelial, purulent, tubercular, etc.

Dr. Lee insists upon the fact that this form of dermatitis belongs to children exclusively. The fact that it affects so large a per cent. of children in hospital is evidenced in favor of this view.

The dermatitis of children is in a very small proportion of cases (two per cent.) the result, apparently, of hereditary tendency. Our author's theory of the pathology of this trouble was stated by him some time ago, and is a plausible one. The presence of any local sore may be followed in children by a dermatitis of the head or other part. This fact explains the skin affections that sometimes follow vaccination, herpes, varicella, etc. It is thought by some to be due to a nervous influence; by Dr. Lee to local absorption of some product of inflammation yet unknown, and a poisoning thereby of the blood. Such morbific agent may result from disturbances in digestion or dentition, as well as from various lesions of the skin.

Among the remaining one-third of children who have not this dermatitis, the skin troubles are variously divided. The syphilitic cutaneous cases occur in the ratio of about five per cent. on all cutaneous cases. The syphilitic eruptions were found to have a distinct character according to the history of the parents. Thus, if the father's disease is recent and the mother has suffered, the infant presents a skin profoundly diseased, the nasal and oral orifices being also affected. If the father's disease is of older date and the mother escaped, the infant (at twelve months) shows only condylomata, or perhaps gummata which have softened till they became like furuncles, painless and soft.

Of the remaining diseases, about six per cent. on the whole were tinea tonsurans, of which nothing especial need be said.

From three to three and a half per cent. were cases of herpes. This disease less frequently affects the abdomino-dorsal region (herpes zoster) in children than in adults. Such affections as scabies,

congenital disease of the skin—which latter has a curious relation to the health of the mother during pregnancy—scrofulous and tuberculous disease, together with a few pathological rarities complete the list.

THE TYPHOID EPIDEMIC IN PARIS.

The prevalence of typhoid fever in Paris has excited much attention, in part, as it seems, because there was not sufficient accommodation in the hospitals for the new cases.

The epidemic was announced in August. But it was two months before proper preparations were made for it. The official statistics show that on October 2d there were in the hospitals of Paris 1,166 typhoid fever patients. A week later this number had increased to 1,845, with a daily admission of 137 cases.

In the succeeding week the number of hospital patients increased to 2,156, but the daily admissions were somewhat less. Since that time there has been a steady decline in the daily admissions until on October 25th the number was only twenty-five. The epidemic seems, therefore, to be on the wane. The mortality rate is not very creditable to French therapeutics, assuming that the disease had no especial malignancy. In one week the admissions were 740, the deaths 116; during the next week there were 407 admissions and 92 deaths. One may ask what has become of the antiseptic treatment or the antipyretic treatment, by which the mortality may be reduced, we are told, to six per cent. or less.

Despite the large number of typhoid fever cases, the total mortality for the city was not unusually great. In the week ending October 8th the number of deaths was 1,111, of which 244 were from typhoid fever.

THE COMMITMENT OF LUNATICS.

Much sensation has been created in this city by the recent removals of alleged sane men from the City Insane Asylum. We are informed that within a few months nine patients confined in the Ward's Island Asylum have been declared sane and removed. The public press, especially the sensational weeklies, have utilized the occasion to make sport of medical experts, and to intimate that dark deeds are being constantly done by these gentlemen and the asylum superintendents. We are told that the "medical profession is spotted with scoundrels" who are willing to send sane men to asylums for the sake of a bribe from the relatives. Other "scoundrels," under like persuasion from conspiring consanguinity, keep these poor victims in the asylums.

It is needless to say that a great deal which has been written and spoken of late about incarcerating the sane is sensational and untrue. People do not reflect that there must be a very carefully arranged combination of circumstances in order to get a sane man into an asylum and keep him there. The relatives or friends must be conspirators; the two examining physicians must be in league with them, or else extremely incompetent. And we would here remark that it requires no extraordinary or special skill to recognize most cases of insanity. Further, the judge must be very negligent (which is, perhaps, likely enough); and finally, the asylum superintendent and his assistants must all be bribed or deceived. Now it is really quite rare for all these things to happen regularly together. We do not deny that they occasionally occur, and that in small or private asylums the opportunities are possibly greater.

In some of the cases that have recently been discussed, there has apparently been gross carelessness and stupidity, but we very much doubt the "conspiracy."

Our present law regarding the commitment of the insane is a tolerably good one. Yet there is dissatisfaction with it, and some changes are needed in order to relieve public distrust and apprehension. In all matters pertaining to the commitment and care of lunatics, there should be the fullest guarantees of fair play. The past history of asylums has made people suspicious of them, and not without cause. In the present law of commitment there is a temptation to haste and carelessness, as well as a chance for wrong-doing. The proposed amendments would make the process of commitment more cumbersome and tedious, yet this would be worth while if it gave a greater confidence to the public.

The Subcutaneous Insertion of Laxative Remedies.—The following preparations have been used hypodermically at Berlin for therapeutic purposes: Aloïn, colocynthine, alocynthinum purum, (Merck's) catarthine, citrulline, extract colocynth, leptandrine, euonymin, baptisin, and elaterium. Most of these substances being only slightly soluble in water are not appropriate for hypodermic application. Aloïn and the preparations of colocynth proved themselves most worthy of use. Aloïn 1 to 8 of warm glycerine, injected in quantities of 60 to 120 minims produces a mild laxative effect in from six to eight hours. The same quantity administered internally expresses an effect in the same time. Citrulline and colocynthinum purum in doses of 5 to 10 milligr. act in even a drastic manner. Citrulline is a resinoid of colocynth. This resinoid injected per anum in the same quantity as hypodermically acts in much shorter time. This same was found true in the use of other preparations employed. Therefore applications of laxative remedies are for the most part preferably made per anum. The preparations of colocynth administered hypodermically produce tenesmus and sometimes catarrh of the rectum. Conclusion: The hypodermic injection of laxatives does not diminish the dose nor shorten the period before the effect appears, nor is there greater safety in thus administering such remedies, so that powders, pills, and infusions of these agencies are much to be preferred.—*Therapeutic Gazette.*

Reviews and Notices of Books.

A System of Human Anatomy, Including its Medical and Surgical Relations. By Harrison Allen, M.D., Professor Physiology University Pennsylvania. Section I. On Histology, by E. O. Shakespeare, M.D. Section II. On Bones and Joints, by Author. 4to. Philadelphia: Henry C. Lea's Son & Co. 1882.

We have received the first two sections of this work, the one comprising Histology, by E. O. Shakespeare, and the other, by the author, treating of the bones and joints of the human body. Each is contained in a portfolio, is of quarto size, double columned, and is supplied with full-sized page plates specially prepared from dissections by the author. The work is an entirely new one, on a comparatively new plan, for which reasons it commends itself to the special notice of anatomical students. The design of the author is to present the facts of anatomy in the manner which shall appear to be best suited to the requirements of the student and the practitioner of medicine. In a word, it is to be considered a study of applied anatomy in its widest sense—a systematic presentation of such anatomical facts as can be applied to the practice of medicine as well as of surgery. An attempt to fulfil such a promise brings with it many responsibilities. It implies a wide grasp of a very comprehensive subject. Our author has, however, proved in many ways his peculiar fitness for the task. He is concise, accurate, and practical in his statements, and succeeds admirably in infusing an interest in the study of what is generally considered a dry subject.

Dr. Shakespeare has also justified the wisdom of the author in the assignment of the department of histology. This latter topic is treated in a masterly manner, and the ground is travelled over by one thoroughly familiar with it. The illustrations are made with great care, and show very satisfactorily the different histological conditions of the various grand divisions of tissue-structure.

It would be impossible, except in a general way, to point out the excellence of the work of the author in the second section, that devoted more particularly to the consideration of the bones and joints. There is as much of practical application of anatomical points to the every-day wants of the medical clinician as to those of the operating surgeon. In this respect it is different from the many excellent works on anatomy, and in so far deserves special and meritorious recognition. The physician has as much need of the knowledge of the relations of the internal organs, their variations of position, structure, and size, within the limits of health, as does the surgeon of such parts as are subjected to the various operations. The physician, by this kind of knowledge, is as well prepared for the interpretation of symptoms, and the exact localization of diseased action, as is the surgeon by a like proficiency in his anatomy enabled to guide the knife safely in dangerous localities. And our author has done his best to secure for his work a corresponding range of adaptability. In fact, this has been so successfully done that few general practitioners will read the work without a feeling of surprised gratification that so many points concerning which he may never have thought of before are so well presented for his consideration. Saying thus much for the sections before us, we have striven to be within the bounds of conscientious conviction. We wish, however, we could include in this statement an equal commendation for the plates. But, in reality, they by no means do justice to the text. Although evidently got up at considerable expense, they fall far short of what one might expect in a work of this sort. They are, as a rule, very bad, and their general appearance decidedly unartistic. It is a matter of surprise that any artist, having a proper conception af outline and shadow, should allow many of these specimens to escape from his pencil. The general impression they convey is that of confusion of parts, and general indistinctness of the whole If one faculty more than another is required in such drawings, it is that of working up details. This can only be done by correct outlines, proper shading, and due attention to perspective. We are sorry to say that there is a manifest failure in all these particulars. In many instances the names of the parts are so mixed up with loose and sketchy shading as to be almost entirely useless for ready reference. This is to be regretted the more, as these names are in many cases the only indications of the artists intention. As an offset to this criticism, we are happy to state that the illustrations in Dr. Shakespeare's chapter are simply superb.

It is to be hoped that in the remaining four parts of the book yet to come, that the defects noted will be remedied, for it is to be deplored that a work which is destined to be the best of its kind in any language should not be perfect in every respect.

The Change of Life in Health and Disease. By Edward J. Tilt, M.D., Past President of the Obstetrical Society of London. Fourth Edition. Philadelphia: P. Blakiston, Son & Co. 1882.

Except in the matter of a new preface, containing spasmodic strictures on the barbarous tendencies of American gynecology, the fourth edition of Tilt's treatise does not differ materially from its predecessors. Hints of great practical value abound in the work, but there is also a large admixture of rather unprofitable theory. Still the book has no rival in its special field. It will certainly be read with profit and interest by all who are called upon to treat disease as modified by the factor of climacteric life, which is equivalent to saying by the entire profession. The American edition is printed on good paper, with excellent type, and our copy is furnished with neat paper binding, which insures convenience of handling.

Essentials of Vaccination. By W. A. Hardaway, M.D. Chicago: Jansen, McClurg & Co. 1882.

In this little volume the author has endeavored to place before the profession a *résumé* of the more essential facts relating to vaccination. The text is made up of ten chapters, beginning with the history of vaccination and inoculation, animal pox, and particularly vaccinia in the cow; its communicability, differentiation, etc., and its relationship to variola in the human subject, receives much interesting consideration. The symptoms and course of an inoculation (chapter iv.) are then detailed, together with certain deviations considered to be normal, in regard to appearance of the lesion, delay in the progress of the vesicle, a relatively lengthened period of incubation, insusceptibility, etc. Various abnormal modifications, so-called spurious vaccinia, certain complications and irregularities, their causes, and the influence of other diseases, are then dis-

cussed, followed by a chapter devoted to the subject of re-vaccination and the questions thereby suggested. Certain general considerations are afterward presented, relative to the merits of the different viruses, and the degenerative influence of many removes upon the prophylactic power of the vaccine lymph. Chapter viii. affords much useful information in detail, on the various and most approved methods of obtaining and storing the virus, both humanized and bovine. The subject of operation is then taken up, together with the several influences affecting it; notably the age, condition of the person, the value of vaccination after exposure, as well as the minor details of the procedure itself, which though apparently a simple one, nevertheless receives many observations that are commendable to all. The book finally closes with a general consideration of the objections to vaccination, the protection afforded, and the alleged attending dangers. In presenting his work, the author gives evidence of much valuable research, which not only the young practitioner, but likewise the more experienced, may receive with profit to himself, and possibly with incalculable benefit to his patients.

THE PHYSICIANS' VISITING-LIST FOR 1883. Philadelphia: P. Blakiston, Son & Co.

LINDSAY & BLAKISTON'S Visiting-List, having enjoyed thirty-one years of uninterrupted popularity, may safely rest on its own merits. It will be found, as usual, to contain some improvements and modifications, among which we notice a new table of poisons and their antidotes.

A MANUAL OF THE DISEASES OF THE EYE. By C. MACNAMARA, F.R.C.S., Surgeon to the Royal Westminster Ophthalmic Hospital. Fourth Edition. 12mo, pp. 520. Philadelphia: P. Blakiston, Son & Co. 1882.

IN the fourth edition of this work the author has rewritten the chapters on errors of refraction of the eye and also those on diseases of the choroid, optic nerve, and retina. As a whole the book is well written, is practical in character, and, for its size, contains more valuable information for the practitioner than any similar work we have seen.

SPEECH AND ITS DEFECTS: Considered Physiologically, Pathologically, Historically, and Remedially. By SAMUEL O. POTTER, M.D. Lea Prize Thesis of Jefferson Medical College. Philadelphia: P. Blakiston, Son & Co.

ALTHOUGH Dr. Potter attempts to present his subject from a rather large number of standpoints, he has succeeded in making a compact and interesting little work. There are practical hints for the treatment of stuttering, etc., which will be found particularly valuable to the medical reader.

WHAT TO DO IN CASES OF POISONING. By W. MURRELL, M.D., M.R.C.P. Detroit: Geo. S. Davis. 1882.

As the author very justly remarks, the practitioner can imagine "nothing more painful than to be called in to a case of poisoning and not to know what to do." This little work, already in its second edition, presents, in a short and concise manner, directions for the treatment of the various poisons. The author supplies the contents of an "antidote bag," for ready use in emergent cases, the value of which is self-evident. The various emetics, their actions, doses, etc., are then cited, following which the chief part of the text is devoted to the several poisons and their treatment, arranged alphabetically. Besides complete revision, an addition has been made to the text in the matter of fatal dosage. It is an exceedingly useful little book, not only offering instruction but guidance to the practitioner in what might otherwise prove an hour of great trial.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 16, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

EXCISION OF CHANCRE AS A MEANS OF ABORTING SYPHILIS.

DR P. A. MORROW read a paper on the above subject in which the question was asked, Is it possible by excision of the initial lesion to destroy the syphilitic virus and so prevent infection of the general system? The author of the paper then presented the theories and practice of Bell, Hunter, and Ricord concerning the treatment of chancre, and stated that it had been an almost universal practice until a comparatively recent date to destroy the primary sore with caustics as soon as it was recognized. In 1877 Auspitz first excised the initial lesion, and since that date this method of treatment had been practised by numerous surgeons and with apparent success in quite a number of cases. In Germany the current opinion was largely in its favor. In France it had by no means received the same approval. In England the operation had been practically ignored. In this country excision had not been extensively practised, and the general sentiment seemed to have been averse to its adoption as a means of cure.

Dr. Morrow then gave a *résumé* of the claims of the partisans of excision, and described the manner of performing the operation. The method consists in lifting the indurated mass and, with a knife, making a clean incision through the healthy tissue immediately surrounding it. The loss of tissue was rarely followed by unfavorable results, such as cicatrix, deformity, etc. Subsequent induration in the cicatrix might require a secondary excision. The claims for the method had been that it prevented the development of syphilis, or that the virus was attenuated by the procedure, and even if its abortive effects were negative, it was to be recommended as a local adjuvant, thereby converting what might prove to be a troublesome ulcer, into a sore which frequently healed by first intention. Secondary adenitis had not been regarded as a contra-indication to excision, and when performed in time the claim had been that it prevented the appearance of the secondary symptoms of the disease.

Of course, if the local lesion be evidence of a constitutional affection it was impossible to arrest or modify the effect of the general disorder by excision or other methods of treating it.

The author of the paper then presented an outline of the ordinary evolution of syphilis. The first appreciable phenomenon was always manifested at the point of infection, and after the lapse of a certain period of time an eruption of secondary symptoms took place, etc. Here the question arose, At what

particular time does the generalization of the virus occur? And the views entertained concerning the nature of the chancre were given; that is, whether it was a purely local lesion or the manifestation of a general disease. The conclusion reached was that the teachings of analogy and the deductions from experiments were opposed to the theory that the chancre is a purely local affection.

Turning to the clinical aspect of the question, reference was again made to the views and practice of Bell, Hunter, and Ricord, and the teachings generally in the French and German schools. Under this head were studied inoculation experiments which had been performed, and also some of the sources of error, in forming an estimate of the value of excision were pointed out, such as the fact that all syphilographers recognized the impossibility of determining positively the exact nature of a suspicious sore until induration had developed, and also that medical literature was full of cases in which the most energetic treatment practised early had failed to prevent or retard constitutional symptoms.

Dr. Morrow believed it to be the opinion of most syphilographers that destructive cauterization of the primary lesion was absolutely useless as an abortive measure. Even Ricord had been converted to the belief that cauterization or excision was inert as a prophylactic measure.

With reference to excision and its results, he had collected the records of 222 cases, of which 60 had been reported as successes; by success meaning the non-appearance of secondary manifestations of syphilis within a period varying in length from four months to four years.

Criticisms upon the report of the sixty successful cases were then made. A certain number had been reported by unicists, and were open to the objection that the sore excised was not chancre, the initial lesion of syphilis. Some cases, also, had been reported as successes where the operation had been performed before the time had arrived at which it was possible to determine exactly the character of the lesion.

The conclusions reached by the author of the paper were substantially as follows:

First.—That the facts of clinical experience, as well as the deductions from analogy and experiments, were opposed to the theory of the local nature of chancre upon which the practice of excision was based.

Second.—That the practice of excision of chancre as a means of aborting syphilis was condemned by the results of clinical observation.

Third.—That the sources of error in recorded successes were comprehended under doubtful diagnosis, and insufficient observation.

Fourth.—That in cases where secondary accidents failed to appear after excision there was no positive evidence that the result was due to an abortive influence of the operation.

Fifth.—That there was no evidence that excision of chancre attenuated the syphilitic virus or modified the general symptoms of the disease.

Sixth.—That it could not be recommended as a local adjuvant, because it was opposed to the principles of sound conservative surgery.

[The paper will be published in the December number of the *Journal of Cutaneous and Venereal Diseases.*]

The paper being before the Academy for discussion, Dr. E. L. Keyes expressed his entire assent to the conclusions reached by Dr. Morrow concerning excision of the chancre.

With reference to the physical peculiarities of the chancre, he believed that it might be of the most malignant character possible, and yet have no induration.

With regard to malignancy, he thought that the syphilis of the present day was not nearly so severe as the disease described under that name as far back as the fifteenth century. Syphilis, as he saw it in patients in this city, was a comparatively mild affection. Certain forms of treatment afforded a greater guaranty than others that the patient would recover completely; but it was an indisputable fact that persons suffering from the malady did not uniformly die of the disease, as was at one time supposed to be the inevitable result. A person might have syphilis and the disease progress with the greatest possible mildness. It was the uncertainty and the irregularity of the phenomena of the affection that constituted the chief charm in its study. He had not had any personal practice in excision of the primary lesion.

Dr. E. B. Bronson concurred with the conclusions reached by Dr. Morrow. He had performed excision of chancre a sufficient number of times to satisfy himself that the operation was feasible, and, in the cases in which he had operated, induration of the glands did not develop. Whether or not syphilis developed he was unable to ascertain, because the patients were dispensary patients who soon passed from under observation.

Dr. G. H. Fox accepted the general conclusions reached by the author of the paper. He had performed the operation in only two cases; in one no symptoms of syphilis followed, in the other evidence of syphilis did follow, although the disease seemed to pursue a milder course than the average.

He was inclined to believe that chancre was a local lesion and theoretically its complete removal should prevent general infection. Practically, however, the theory failed, and therefore it could not be recommended as a measure of treatment for the prevention of syphilitic infection. The impossibility of making a positive diagnosis of chancre in every case was perhaps the most important source of error, and that being the case it would be impossible to determine that excision had a beneficial effect or any effect whatever in preventing the development of syphilis. He believed, with Dr. Keyes, that syphilis in this city was usually a mild affection. He was also inclined to think that the reports of cases observed in the fifteenth century were those of selected cases, as naturally the physicians of those days selected cases which presented the most striking features. Although its ravages could not be overestimated, it should not, at the same time, be overlooked that many persons who contracted syphilis recovered even without any treatment and lived to a good old age.

Dr. F. R. Sturgis supplemented Dr. Morrow's criticism upon cases of excision which had been reported as successes, by referring to several in which it had been stated that adenitis was absent at the time of the operation and no subsequent symptoms made their appearance. The absence of adenitis he thought would throw suspicion upon the character of the sore in those cases. In addition there were certain cases, reported as failures, in which it was said that adenitis was present.

Still further, in examining the French and German cases, it would be found that in the former adenitis

was present, and in not a single one had success been obtained. That fact would lead to the inference that there was some error in the German statistics. To strengthen the inference it was stated that Auspitz did not distinguish between a simple ulcer and the chancre the accepted initial lesion of syphilis. Dr. Sturgis regarded induration of the lymphatic glands as an important factor in deciding as to the character of the sore, and believed that when absent the diagnosis of initial lesion of syphilis was vitiated. He heartily concurred in the conclusions reached by the author of the paper.

Dr. L. D. Buckley theoretically and practically accepted the conclusion reached by Dr. Morrow. He had performed excision of chancre in one case, and the operation was followed by severe syphilis. If, however, the wound healed without complication, he thought the surgeon might be justified in resorting to it for the purpose of preventing bad cases of chancroid.

Dr. R. W. Taylor agreed with Dr. Keyes concerning the benignity of syphilis. With a tolerably good constitution, a docile patient, and an intelligent doctor, syphilis could easily be robbed of all its terrors.

He also believed that there were cases in which conservative surgery would recognize the justifiableness of excision of chancre. For example, a chancre existed upon the end of the prepuce and produced phimosis, there were two procedures offered, one was excision and the other the internal administration of mercury. The first finished the matter at a stroke, decorated the organ, and avoided by circumcision unpleasant results. The other permitted delay, and the cases did not do so well as those in which the mercurial treatment was begun at the evolution of the secondary lesions. He believed therefore, that in certain cases conservative surgery would be advanced by excision.

He had resorted to excision in fifteen cases of ordinary hard chancre, and in none was syphilis aborted. In a few cases, however, the operation was followed by an apparent attenuation of the virus; that is, the secondary manifestations were postponed until the seventy-sixth, seventy-ninth, and eightieth day. Dr. Taylor then cited one case in which there was a little excoriated papule not larger than four times the size of the head of an ordinary pin. It was deep red and slightly elevated. The man had sexual connection twenty days previously. The woman was examined, and close by the fourchette an excoriation, not a mucous patch, was found, and upon her body was a declining roseola. He told the patient that his pimple was probably the initial lesion of syphilis. Excision was practised as follows: First the penis was washed with carbolized water. Then he cauterized the sore with carbolic acid and dusted the top of it with calomel. Next he transfixed the papule with needles, lifted it up and cut away the tissue to the distance of one-fourth of an inch all around. The wound was left open and it healed kindly within ten days. The patient went on without enlargement of the inguinal glands, and at the end of forty-five days a distinct syphilitic roseola developed, which was followed by other evidences of the disease. At this point Dr. Taylor said he was willing to go upon the record as believing that syphilis is not always attended early by enlargement of the inguinal ganglia. He claimed for the operation of excision that it was a failure as a prophylactic against syphilis, but as a cure for chancre it was sometimes beneficial.

Dr. F. N. Otis believed that in order to form an intelligent opinion with reference to the desirability of excising the initial lesion of syphilis, we should first inquire concerning the real nature of the true chancre, and the manner in which systemic infection takes place. He believed there was sufficient authority to warrant the statement that the beginning of syphilis was in an infecting cell which did not differ in appearance from the ordinary white-blood corpuscle; that syphilis was a process of proliferation; and that it might go through its entire course without open lesion of any kind. That there must be a point of abrasion for the introduction of the virus was well understood, but that such abrasion would heal as if no inoculation had taken place was well proven. Competent observers had determined by microscopical examination that there was an accumulation of cells first at the point of inoculation; that these cells gradually moved along in the lymphatics, and after a period varying from four to six weeks the general manifestation of syphilis announced themselves in a roseola. Up to that time there might be nothing to show that the patient had been diseased. There was, then, unquestionable evidence that the disease had been local. He would therefore say that it might be considered reasonable to remove as many of these cells which possessed an infecting property as possible, and so far as his experience went, wherever the initial lesion was situated so that it could be removed without incision into the glans or the body of the penis, excision should be performed, but he would never substitute the operation or expect it to take the place of legitimate subsequent treatment. Practically he had performed the operation in at least fifteen cases, and the result had been that great benefit had accrued as a matter of personal convenience to the persons affected. According to his experience, removal of the requisite amount of tissue had not been followed by any deformity, and as a rule it had been difficult to determine where the tissue had been removed when examination had been made some time afterward. It had seemed to him that in the cases operated upon, the disease had been milder in its manifestation than in those where excision had not been adopted. That there were yet sufficiently severe cases of syphilis, he thought could be satisfactorily demonstrated to any one who would visit the venereal wards in Charity Hospital.

Dr. Morrow, in closing the discussion, said that if by the term benignity of syphilis, it was meant that there were benign cases of syphilis he consented, but if it was meant to be understood that syphilis was a benign disease he dissented. He would ask Dr. Keyes if syphilis, according to his observation, had been shorn of its malignancy with regard to heredity.

Dr. Keyes said he wished to be understood as saying that syphilis, as he saw it, was comparatively benign, although he had seen no evidence that its hereditary effects had been especially influenced.

The Academy then adjourned.

SECTION IN OBSTETRICS.

Stated Meeting, October 21, 1882.

Dr. H. E. Crampton, Chairman.

Dr. J. Lewis Smith reported a case of

PERNICIOUS REMITTENT FEVER AFTER PARTURITION.

The patient was a primipara, aged twenty, of a strongly marked nervous temperament. Her labor was prolonged to forty hours, and finally, when the

head of the infant nearly pressed on the perineum, was easily terminated by the short forceps with very little injury. Dr. Smith, appreciating the fact that there was inertia of the uterus, now administered ergot, which, however, was vomited. The patient's general condition was good, but the pulse, which had fair volume, was accelerated. After uterine contraction was secured by kneading, and while waiting for the expulsion of the secundines, with one hand compressing the abdomen, and the other lying within the vagina, so as to detect any undue hemorrhage, which might occur, and while the placental mass was felt pressing upon the fingers, the patient, without a moment's warning, ceased breathing, her head dropped upon the chest, and her hands and fingers were strongly flexed. The placenta was fully detached by lateral movements with the fingers, and immediately removed. It was afterward examined by Dr. Smith and the patient's mother, and found to be unbroken. The epileptiform attack lasted only about one-fourth of a minute, when she immediately and fully recovered her consciousness, and was talkative and cheerful, on account of the favorable termination of her long labor.

On the following day, May 23d, no unusual symptoms were observed, except that the pulse was constantly above 100. The flow was normal, and there was the prospect of a good recovery. During the night of May 23d the patient did not rest well, and the flow of pure fresh blood was so abundant that Dr. Smith was sent for early on the following morning. When he arrived the patient had vomited, and at same time had expelled a mass of fresh-looking clots as large as a goose-egg. To the fact of a free flow of blood at this time, which must have washed out the uterine cavity, the doctor attached much importance in the way of diagnosis, for within eight hours of the time of this flow the symptoms were unquestionably present of the disease of which the patient perished.

At 2 P.M. on May 24th, a rigor occurred, accompanied by some headache, and followed by a moderate febrile movement. On the 25th, the patient was comfortable, but somewhat feverish. On the 26th, the second chill occurred, and from this time a chill followed by fever and perspiration took place each day, with remissions, but not an apyrexia, unless on one occasion, after free perspiration, when the thermometer, in the axilla, registered the normal heat. During the remissions the temperature was usually about 100° to 101½° F.; in the exacerbations during the first week the temperature did not rise above 103½° F., but toward the close of life it reached 104°, 105° F., and finally 107° F. The febrile movements were more and more protracted, remaining so long in the last days that it seemed as if the disease would have assumed the type of a continued fever had the patient lived longer. In the last days the perspiration occurring in the remissions of the fever, was more profuse than at first, drenching the underdress and the pillow, and so cooling the surface that while in the hot stage cloths wrung out of ice-water were freely applied to the face, head, and arms to allay the pungent heat, the surface now became so cool, that after the limbs were wiped dry, warm applications were plainly indicated. Professors Lusk, Barker, Otis, and Metcalf attended the case in consultation, and these gentlemen could detect nothing wrong in the uterine system. Professor Barker saw the patient but once, on the eve of his departure for Europe, but the others made several visits, and concurred in the diagnosis of pernicious remittent fever.

Thirty, and afterward sixty, grains of quinine were administered daily. The sulphate was given by the mouth, the bisulphate per rectum, and the bimuriate of quinia and urea hypodermically, seven to ten grains at a time, and yet day by day the paroxysms became more severe, and the febrile movement more intense and protracted. On the seventeenth day muguet appeared over the faucial surface, a sure forerunner of death, and on the eighteenth day death occurred in a state of exhaustion. The patient in the last week had become considerably emaciated. Two weeks after the death of the patient, the wet-nurse, who had been previously healthy, never having had any symptoms of malarial disease, and who almost constantly, night and day, occupied the same floor with the patient, contracted a tertian intermittent fever, which was allowed to continue a week, until the fourth paroxysm, when the appropriate remedies were employed. An autopsy was not permitted.

The only doubt as to diagnosis was obviously whether the patient had septic or malarial poisoning. That it was the latter was believed for the following reasons:

First.—The complete removal of the placental mass, the normal lochial discharge, the normal condition of the uterine system from beginning to end, so far as could be ascertained, and the free flow of blood, or hemorrhage, as mentioned above, so that the doctor was sent for to arrest it, and which must have thoroughly washed out the uterine cavity eight hours before the disease of which the patient died began. This flow, and the expulsion of fresh looking clots, which occurred at the same time, could have removed the conditions for septic poisoning, had they been present in the uterine cavity.

Second.—The occurrence of a malarial disease on the same floor where the patient resided. The conditions of malarial poisoning were certainly present, while those of septic poisoning were probably absent.

Third.—The symptoms resembled very closely those in reported cases of pernicious remittent fever, and of the so-called typho-malarial fever, in which quinine, though largely administered, fails to arrest the malady. Dr. Smith quoted authorities and cases to show that the malarial disease is apt to be severe in parturient women, assuming the pernicious type, and expressed the belief that the remark made by Trousseau in reference to Paris applied also to New York. Trousseau, in his remarks on pernicious intermittent fever, states that this malady, rare in Paris, has become more frequent by excavations and disturbances of the surface of the earth (*les mouvements de terrains*).

DR. C. A. LEALE then reported several cases of marked malarial poisoning traceable to excavating for building purposes and the upturning of saturated soil. He also referred to cases in which it seemed established that the serious sickness was due to exposure to emanations from human excreta and sewer pollutions.

These communications were discussed at some length and several cases were cited that illustrated different phases of malarial poisoning, and the opinion was expressed that, in absence of post-mortem examination, the diagnosis of septicæmia in Dr. Smith's case had many points in the clinical history in its favor.

The Section then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 25, 1882.

DR. G. L. PEABODY, VICE-PRESIDENT, IN THE CHAIR.

POPLITEAL ANEURISM — LIGATION OF THE FEMORAL ARTERY.

DR. J. W. HOWE presented a patient with the following history: James L——, aged fifty, engineer, admitted July 8, 1882. Previous history: Has always enjoyed good health; has had gonorrhœa and chancroid; has always freely indulged in stimulants. About three years ago he noticed a swelling in right popliteal space which increased gradually, but caused him no pain or inconvenience until about one year ago, when he felt pain on movement, and found that his right leg was getting weak. The tumor increased in size up to the time of his admission. On examination a tumor filling the popliteal space was found. It had a heaving pulsation, with a double bruit, and a marked thrill was communicated on palpation. The femoral artery was found dilated and all the arteries showed evidences of marked atheromatous changes.

The patient was treated by Tufnell's method, and diet restricted to meat only and small amount of liquids. The medical treatment consisted of the administration of kali iodidi, 20 gr. t. i. d. During the first month in the hospital the pain became less and the œdema of leg was reduced—foot and leg became somewhat warmer.

About August 10, 1882, the tumor began to increase in size and œdema and pain returned. The pain was so great that Magendie's solution of morphia had to be used constantly. A change was made from pressure by tourniquet to that of a lever, to the long arm of which a weight of six pounds was attached. The pressure was kept up for a week and then was discontinued, as the integument at the point of pressure began to slough. The tumor had now increased to twenty-five inches in circumference, and at one point the integument was very red and œdematous. On September 4, 1882, the femoral artery was tied in Scarpa's triangle, with catgut ligature; wound sewed up and drainage-tube inserted. The limb was enveloped in cotton and the wound dressed with carbolized oil. At no time had there been any change in color of the limb, and only a slight coldness of the toes was noticed. Œdema of the foot and leg rapidly diminished; tumor became gradually smaller and firmer. Wound healed rapidly except over the site of the ligature, where there was a small sinus, from which a few drops of pus could be pressed. The circulation in leg was perfect, the leg was very weak and the patient was compelled to use crutches. Circumference of leg at the site of tumor, on the day of the patient's discharge, was seventeen inches.

MULTIPLE FIBROMA OF THE UTERUS.

DR. BOZEMAN presented the uterus and its appendages, together with the vagina and rectum, removed from the body of a woman from whom the fibro-myoma was discharged which he presented at the stated meeting September 20th. At the time he presented the first specimen the patient was doing well. She continued to progress favorably for two or three days, when evidences of pelvic abscess developed, and on October 1st rupture occurred into the vagina with the discharge of a large quantity of offensive pus. Her temperature immediately fell from 104° to 100° F. The patient then progressed favorably until October 7th, when she was seized with general peritonitis, which, under the ordinary treatment, terminated, but with the reappearance of the discharge into the vagina. From that date the case progressed favorably until October 19th, when the patient began to vomit greenish fluid, and on the 20th she became markedly prostrated, suffered from extreme dyspnœa, with great rapidity of the pulse, and on the following day she died. The specimen exhibited the three varieties of fibroma—the submucous, the intramural, and the subperitoneal. Another interesting feature in the specimen was the fact that Douglas's pouch extended about an inch and a half below the cervix. The anterior wall of the vagina became very much thickened during the time of the occurrence of the disease, and gave rise to an immense cavity, which could be recognized distinctly during life with the finger introduced into the rectum, although its exact explanation was not made out until the post-mortem examination was made.

COLLOID CYSTOMA OF THE OVARIES WITH THE TRANSFORMATION OF THE OMENTUM INTO A SIMILAR COLLOID TUMOR.

DR. BOZEMAN also presented specimens accompanied by the following history: They were removed from the body of a woman, aged thirty-five, the mother of one child, two years old, who was operated upon at the Woman's Hospital, October 1, 1882. She had always been in good health up to last February, when she got her feet wet and took cold. About the beginning of April she first noticed an enlargement in the left side of the abdomen. After the first of July the increase in size was rapid, and soon the enlargement was symmetrical upon both sides. Then began a loss of flesh about the face, arms, and chest, which continued up to the time of his first examination, made October 10, 1882, when he detected distinct fluctuation throughout nearly the entire mass. A solid substance was noticed in the epigastric region, which was thought to be in the wall of the cyst. The uterus was slightly retroverted, turned toward the right, movable, and measured three inches. There was flatness on percussion over the lumbar region to the left of the spine, pointing to the left ovary as the seat of the enlargement. The girth of the abdomen was forty inches. The diagnosis was multilocular ovarian cyst. When the abdomen was opened it was found that the tumor was extensively adherent, but the adhesions were broken up without difficulty, the pedicle of one large tumor reached, a ligature applied in the usual manner, and the mass removed. The second tumor was then brought into view, also filled with colloid material. The entire omentum had undergone the same colloid degeneration, and it was removed. The weight of the ovaries and the omentum was twenty-seven pounds. The right kidney was also involved, especially the suprarenal capsule. In front of the right kidney there was a patch of this peculiar cystic degeneration seen in the mass of the omentum. The removal of the kidney was deferred for the present. Up to the fifth day after the operation the progress of the case had been most favorable. As soon as the patient came from under the influence of the anæsthetic the supporting plan of treatment was begun, consisting in rectal alimentation and the administration of quinine and opium. The specimen was accompanied by the following report, made by Dr. W. H. Welch, Pathologist at the Woman's Hospital:

There are two tumors of similar structure, one growing from each ovary, and one much larger than the other. With each is connected a small piece of the abdominal extremity of the Fallopian tube by means of a distinct meso-salpynx. The tumors are multilocular cystomata; the walls of the cysts are thin. The cysts are filled with extremely thick colloid material. The cysts are all lined by columnar epithelium, both granular and in the form of goblet-cells.

The omentum is converted into a large thick mass, preserving more or less the form of the original omentum, but consisting of myriads of cysts, mostly minute, some as large as a pea or walnut, each filled with the same colloid material as that present in the ovarian tumors, and each lined by cylindrical epithelium of the same character as that met with in the ovarian cysts. On section tubes lined with cylindrical epithelium, extending from the cysts into the adipose tissue of the omentum, can be seen. It is doubtless by the growth of the tubules, and by their dilatation, that the cysts are formed. There is no doubt, therefore, that the omental tumor is a proliferous cystoma, in all respects like that growing from the ovaries.

DR. FERGUSON presented specimens as follows:

PERSISTENT FRONTAL SUTURE.

Male, aged nineteen; Italian; sailor. Cause of death, multiple fractures. In the median line of the frontal bone there was a suture which divided the frontal bone into halves. The other cranial sutures were abnormally loose. The skeleton in other respects was well developed.

ARTHRITIS DEFORMANS.

The right hip-joint was involved in the diseased process. The preparation was obtained from a male, aged forty-nine; German; hotel-keeper. Cause of death, tuberculosis. The head of the femur was elongated, rough, not covered in the recent state by cartilage, and fitting into the acetabulum, which was much widened and deepened. The inner surface of acetabulum was rough, not covered by cartilage, two and three-fourth inches in depth, and two inches in diameter. There was no motion in the joint. The brim of the acetabulum and the neck of the femur were surrounded by ridges of osteophytes.

The scapula and humerus, from the body of a male, aged sixty; United States; coachman. Cause of death, tuberculosis. He gave a history of rheumatism in the early part of his life, but never had any severe attack, confining him to bed. After he grew up he remained quite free from sickness of any kind until his symptoms of tuberculosis developed. The shaft of the right humerus was shortened, and its head was almost entirely absorbed; it was concave and polished. The glenoid cavity was changed; its brim was rolled out, forming a lip-like projection which surrounded the neck of the bone. The head of the scapula was slightly convex, and polished from contact with the head of the humerus.

FRACTURE OF THE CLAVICLE.

There was an old fracture of the inner third of the clavicle, the fragments being held together by bands of fibrous tissue. At the seat of fracture there were several smaller fragments which were separated and surrounded by bundles of white fibrous tissue. This, in the recent state, formed a tumor two inches by one and a half inches in diameter. There were ridges of osteophytes surrounding the fractured end of each fragment. There was no history of the case.

PAPILLOMATOUS TUMORS OF THE LARYNX.

DR. ELSBERG presented two specimens of tumors of the larynx, accompanied by the following histories:

In the first case the tumor occupied the anterior commissure, and was so extensive that the chink of the glottis was very narrow and was transverse. It was removed from a boy eight years of age. The patient had been seen by Dr. Mackenzie, of London. The boy wore a tracheotomy tube, which was inserted in January last. There was absolute aphonia. The growth was papillomatous in character.

The second specimen was removed from a young man who had formerly been under the care of Dr. L—— of Milan. It occupied about the centre of the left vocal band, at which point there was a spindle-shaped elevation, and from the centre of this there arose a small stem, which was surmounted by a little button-like mass, giving the whole growth the appearance of a mushroom. It was in the posterior commissure of the larynx. There was hoarseness in this case, but not loss of voice. In both instances the growths were removed by means of the intra-laryngeal forceps.

VESICAL CALCULUS.

DR. J. W. HOWE presented a vesical calculus weighing 3,541 grains, which he removed from the bladder of a boy, sixteen years of age. There was a history of vesical trouble existing for seven years. He attempted to remove the stone by the median operation, but finding it too large to remove in that way he attempted to crush it, but failing to accomplish this he then performed the supra-pubic operation. The vesical walls were thick and contracted, and at one point they were slightly adherent to the calculus. Quite a quantity of urine flowed from the bladder when it was entered from the perineum. At the present time the patient was doing very well.

PAPILLOMA OF THE UVULA.

DR. L. E. HOLT presented a tumor which he had removed from the uvula of a patient fifteen years of age. It had existed two years, was painless, but gave rise to a constant desire to remove some foreign body from the throat. There was no history of injury, and the patient was free from any exciting disease. The mother was suffering from probable cancer of the omentum. The specimen had been examined by Dr. W. H. Welch, who pronounced it to be a papilloma. The tumor was removed by the forceps and scissors.

THE RATIONAL SYMPTOMS OF ORGANIC CARDIAC DISEASE WITHOUT VALVULAR MURMURS.

DR. B. ROBINSON presented a heart removed from the body of a patient who entered Charity Hospital. On admission there were present all the rational symptoms of organic cardiac disease, such as general anasarca, more or less serous effusion into the abdominal and pleuritic cavities, etc. Physical examination failed to detect any valvular murmur. The patient died two days after admission, and at the autopsy a double lesion was found in the left ventricle. There was some stenosis at the mitral orifice, the valves were extremely thickened, and probably permitted regurgitation during systole. The aortic orifice was decidedly smaller than it should have been, the cusps of the valves were

thickened and indurated, and doubtless permitted of regurgitation. The left ventricle was somewhat hypertrophied. The special point of interest in the specimen and the clinical history of the case was the existence of the rational symptoms of advanced cardiac disease without the existence of valvular murmurs, and at the autopsy such conditions were found as rendered it almost certain that regurgitation both at the mitral and aortic orifices had occurred. In this case the heart-beats were sufficiently forcible to give rise to murmurs, but no murmurs were detected.

CHEESY DEGENERATION OF THE KIDNEYS.

Dr. Robinson also presented a kidney removed from the body of a patient who had died from advanced catarrhal phthisis. There were large cavities in the lungs, and there was cheesy degeneration of the left kidney. In some places there were almost a semi-liquefaction of the cheesy masses.

ATROPHY OF THE KIDNEY.

Dr. Robinson also presented two kidneys in the advanced stage of cirrhotic change. The right weighed two ounces, the left four ounces. Both kidneys exhibited the atrophic change, particularly in the cortical substance. No albumen was detected in the urine before death, nor was it found in the urine which was removed from the bladder at the autopsy. These specimens also illustrated the clinical fact that the kidneys may be far advanced in atrophic change without albumen being present in the urine.

Dr. Van Santvoord referred to a case in which the only active tubercular process consisted in a peritonitis which took rise from a caseous spot in the kidney.

CEREBRO-SPINAL MENINGITIS.

Dr. J. Lewis Smith presented the spinal cord removed from the body of an infant ten weeks old, which was first brought to the service of Dr. H. D. Chapin, at the out-door department at Bellevue Hospital, when about one month old. It was an eighth month child, but was well developed at birth. When it was two weeks and four days old red blotches appeared upon the buttocks quickly followed by all the usual signs of infantile syphilis. Snuffles appeared when it was one month old. When it was nearly two months old the syphilitic eruption had nearly disappeared under specific treatment, and the child seemed in a fair way to recover. On October 11th it began to vomit, and the vomiting was projectile in character, its bowels were somewhat constipated and from that time until its death, eight days later, it had the characteristic symptoms of cerebro-spinal meningitis: head retracted, clenched fingers, thumb bent over the hand, etc. Temperature 102° F., head not hot, anterior fontanelle not at all prominent. Eyes not attracted by a lighted match; no rash and no apparent sensitiveness of the skin. The child died in convulsions October 19, 1882. The diagnosis was between the sudden development of syphilitic affection of the spinal axis and cerebro-spinal meningitis.

At the autopsy, made by Dr. Chapin, the spinal cord for its entire length was found encased with a pseudo-membrane, with the exception of about half an inch upon the anterior aspect. The exudation, as was the rule, was thickest upon the posterior surface. The cauda equina was also covered with exudation. There were patches of thick exudation upon the under surface of the brain and along the fissures of Sylvius. There was abundance of serum in the ventricles, a fact which was interesting especially in connection with the absence of elevation of the fontanelles. The vertex of the brain appeared to be normal; all the other organs were healthy. It seemed to Dr. Smith that cerebro-spinal meningitis had almost become endemic in this city.

Dr. Amidon believed that the existence of fever would exclude syphilitic disease of the central nervous system.

EXSECTION OF THE CARPUS AND METACARPUS—AMPUTATION OF THE HAND.

Dr. Wyeth presented the carpus and metacarpus removed from a boy fifteen years of age who had a tubercular diathesis. He also suffered from necrosis of the fifth rib which also gave rise to abscess. The left wrist was the one involved, and at the time he first saw the patient last May it was greatly swollen. At that time the question was whether the hand should be amputated or whether an exsection should be performed. After consultation exsection was performed, and the carpus and the posterior portion of the metacarpus were removed. The result of the operation was unfavorable, and amputation was performed two months afterward by Dr. Gerster, after which the patient made a good recovery.

PRIMARY CANCER OF THE BLADDER.

Dr. G. L. Peabody presented a specimen with the following history: N. H——, fifty-seven years of age, a Swede; married, and a hatter, was admitted to the New York Hospital September 16, 1882. He said that twenty-five years ago, he was afflicted in a manner similar to that which at present caused him to seek admission to the hospital, but that the condition passed away, and had left him in comparative health until recently. Ten months ago he began to be troubled with difficult, scanty, and frequent micturition. His urine has been high-colored, and looked to him as if it might contain blood. Recently he had had swelling of the legs and gastric disturbance (anorexia with occasional nausea and vomiting). He has felt feverish, but had had no headache or visual difficulties. He had had slight dyspnœa, but no cough or other signs of pulmonary trouble. Lately his urinary troubles had abated somewhat, though micturition was still painful, especially at the end of the act. He gives a history of syphilis, but denied gonorrhœa.

On admission, at 2.30 P.M., his temperature was 101.1° F.; respiration, 20; pulse, 86. He was well nourished. There was some œdema in the feet and ankles. The circulation in the skin was fair. The heart's action was regular, and there was no murmur. He was given a mixture of acetate and citrate of potash with digitalis.

The day after admission his pulse, respiration, and temperature were normal. Examination of his urine revealed these facts: specific gravity 1,002, reaction acid, contains albumen and pus, but no casts.

He continued to suffer a good deal in urination, especially at the end of the act, and the character of his urine soon changed, it becoming strongly alkaline. A steel sound, No. 26, was passed into the bladder with difficulty, and subsequently his bladder was washed out daily with a solution of borax in water. The prescription above mentioned was soon discontinued and he was given infusion buchu *ad libitum*.

September 27th.—The operation of washing out

the bladder caused great pain, and the residual urine removed was intensely fetid and loaded with mucus, pus, and desquamated epithelium. It was strongly ammoniacal.

September 29th.—Bladder was still washed out. The patient now complained of pain in the chest, but his condition was not otherwise changed.

September 30th.—This afternoon the patient's symptoms suddenly became aggravated. He had a sudden and profuse pulmonary hemorrhage which severely prostrated him. The usual treatment was resorted to, and in spite of active stimulation, etc., he sank steadily, and died at 2.30 A.M., on October 1st.

Autopsy eight hours after death. He omitted all notes that did not seem essential. The lungs were rather loosely bound to the chest-walls by old adhesions. Both of them were congested and œdematous. Near the apex of the right lung was a cavity large enough to hold three ounces of water. Water injected into the arterial branches leading into the upper lobe of right lung readily filled this cavity. It was surrounded by a thin wall of connective-tissue, which did not seem to contain any tubercles.

The kidneys were both hard and white; normal in size; capsules not adherent, surfaces smooth, markings obscure. Reaction to iodine well marked in them both.

Spleen, intestines, liver, peritoneum, and brain were normal.

The bladder contained a large, soft, fleshy mass, firmly attached to the mucous membrane. It was ovoid in shape, with a long diameter of three inches and a short diameter of one and one-half inch. It was situated just behind the position of the trigonum, and there was more of the mass on the left of the median line than there was on the right. It was attached by a broad base, over part of which the wall of the bladder was destroyed. The growth surrounded the entrance of the left ureter into the bladder and extended half an inch into the ureter, partly occluding it. The urine from the left kidney must therefore have trickled through this mass of morbid growth. The occlusion was only partial, and the dilatation resulting was but slight.

The microscopic examination of the mass showed it to be an epithelioma. It had large branching spaces surrounded by a stroma of newly formed connective-tissue and filled by masses of flat and cuboidal epithelial cells. The stroma was but slight in amount. It contained blood-vessels of large size.

A microscopic section of the growth was exhibited.

The condition was a rare one. Secondary cancer of the bladder was not uncommon, especially among women. By reference to Mr. Stein's very interesting work upon tumors of the bladder, published last year, Dr. Peabody found the statement that in 4,777 autopsies made at the Charité, in Berlin, only 7 cases of primary cancer of the bladder were recorded.

Dr. Peabody also reported a case of

CONGENITAL ABSENCE OF THE RIGHT KIDNEY,

with the following history: Philip S——, sixty-one years of age; born in Germany; married, and a brush-maker, was admitted to the New York Hospital suffering from retention of urine due to traumatic stricture caused by a fall that injured his perineum thirty years ago. His general condition was bad. He was operated upon September 21, 1882, but did not do well, although he passed daily about twenty ounces of urine through the opening then made. The urine was acid, had a specific gravity of 1.026, contained albumen, pus, and vesical epithelium. The patient died five days after the operation.

At the autopsy it was discovered that the body contained only one kidney. It was about double the usual size. The capsule was not adherent, the surface was smooth, the markings were indistinct, and the pelvis was lined by a thick phosphatic deposit, part of which still remains adherent. This kidney was situated in the usual position of the left kidney, and did not appear to have resulted from a fusion of the two organs, but simply to be in a condition of hyperplasia. There was no trace of a kidney on the right side, nor was there a ureter on that side. This kidney was supplied with two renal arteries, both of which were short, and there was no renal artery on the other side of the body.

The testicles were normal. The renal plexus on the side of the missing kidney consisted of only a few filaments of the sympathetic without a ganglion. The renal ganglion on the other side was normal in size and position.

The suprarenal capsules were normal, both in size and in position, on the two sides.

The bladder was much hypertrophied. In places its mucous membrane was black and necrotic, and in others it was covered by a layer of phosphatic deposit.

He brought for inspection the kidney, the aorta, the bladder, and the penis. He also presented microscopic sections of the organ, which showed that the capsules of Bowman were somewhat thicker than normal, and in some places were seen aggregations of young cells, indicating an inflammatory condition of the interstitial tissue. As an interesting incident it might be mentioned that the sections had accidentally passed through a partly decolorized hemorrhagic infarction of small size, which contained many crystals of hæmatoidin.

Last year he had the opportunity of presenting a case of this kind occurring in a female, and giving certain other anomalous conditions. In connection with that case he looked up the literature of the subject.

[See report of proceedings of Pathological Society in New York MEDICAL RECORD for June 11, 1881.]

Since that time he had seen records of three similar cases in the New York MEDICAL RECORD for March 12, October 8, and November 18, 1881. In two of these cases the kidney was missing on the left side, in one on the right side.

Proneness to disease in the kidney in these cases was certainly remarkable.

DR. WYETH said, with reference to the vascular anomalies, that he placed in the Wood Museum four specimens of double and multiple renal artery. He thought the abnormality was not so very uncommon.

The Society then went into executive session.

VIBURNUM OPULUS IN DYSMENORRHŒA AND UTERINE PAIN. Dr. A. E. M. Purdy, in the *New York Medical Journal and Obstetrical Review*, reports several cases in which viburnum opulus was found very efficient against dysmenorrhœa and uterine pain. He gave the drug in doses of five grains of the abstract (powdered drug), which is equal to ten minims of the tincture. Previous observers (Hale and Meyer) had found this drug a powerful uterine sedative.

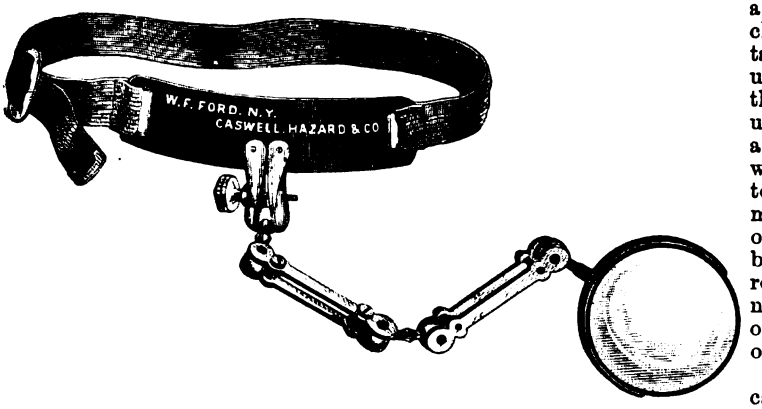
New Instruments.

AN IMPROVED MEANS OF OBLIQUE ILLUMINATION—A CORNEAL CONDENSER.

By E. G. LORING, M.D.,

NEW YORK.

Since the introduction of the elevated railroads the frequency with which foreign bodies are found impacted in the cornea has increased so much that hardly a day passes that the ophthalmic surgeon is not called upon to remove one or more of these painful and oftentimes dangerous particles. This may occur not only at any hour of the day, but of the night as well, and in this latter case it is extremely



difficult, if not impossible, for the surgeon, without the aid of an assistant to hold a condensing-lens, to accomplish his object. This difficulty has, it is true, been obviated in a great measure by an ingenious contrivance described by Dr. Noyes, which consists of a lens so mounted that it can be worn by means of a spring clamp on the end of the first finger on the left hand of the operator. The amount of movement, however, is small, while to chock the eye successfully with the index finger so encumbered, and at the same time keep the cornea illuminated, is a difficult operation and requires considerable practice and skill.

Mr. J. E. Adams, of London, described in the *Lancet*, February 7, 1880, a useful and ingenious little instrument, which consists of two lenses attached to a head-band, the plate of which is worn in the centre of the patient's forehead.

The modification of that idea consists, as shown in the drawing, of an arm, broken at the various points by ball-and-socket joints, so as to give a perfectly free adjustment to the lens in any direction, and at any distance up to the extreme length of the arm. This leaves both hands of the surgeon unencumbered, permits the use of fixation forceps if necessary, and does away with the necessity of an assistant to hold the lens.

The arm is attached to an elastic head-band precisely like the head-band of an aural or laryngoscopical mirror. When in use the band is slipped over the head of the patient in such a way that the hard rubber support comes at the temporal region and on the side of the eye to be illuminated, the lens then being swung into the position desired. By having the plate at the temporal region instead of in the centre of the forehead, as is Mr. Adams' instrument, and the lamp well at the side instead of directly in front, we get rid of annoying reflections of the lens in the cornea, and avoid the irritating effects of the light from a strong condensing lens thrown directly through the pupil upon patient's retina. If the lens is so arranged as to be a little within or a little without its focal length from the eye the section of the cone of light is large enough to keep the cornea covered, even if the eye makes considerable excursions, while as the lens is attached to the patient's head, this latter can be moved to a considerable degree without displacing the illumination from the eye. I have found it of great service in operating upon delicate membranes in the pupillary space, as it gives a much steadier illumination, and one which is more easily controlled than when an assistant holds the lens.

By removing the lens from the clip and supplying a mirror, the instrument, from the character of its joints and the mutability of its position, can then be used as a fixed ophthalmoscope for the upright image, and can thus be used in demonstrating the fundus to a class or in making a sketch of it without the observer being compelled to take up and lay aside the instrument at every look; or the upper half of the ordinary ophthalmoscope can be inserted instead of a simple mirror, and then any optical combination that the refraction of the observed eye may require can be obtained.

I have had a band made which carries two lenses, one on a shorter arm, which is then used as a magnifying lens, but the single one answers every purpose, and for ordinary occasions is the most convenient.

The instrument is also very useful in magnifying small hairs, thus rendering their detection and removal much easier, or in performing any operation at night or whenever the light is poor. When, however, the light is sufficient, and only an increased enlargement is desired, the surgeon, by wearing the band on his own forehead and extending the arm to its utmost, can obtain a large amount of magnifying power, while by slight movements of the head he can successively inspect and keep in front any portion of the anterior surface of the eye or lid.

The instrument can be obtained of W. F. Ford, New York, and A. Keune, New Haven R. R. Building, Franklin Street, New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 11, 1882, *to November* 18, 1882.

Gardner, Edwin F., Captain and Assistant Surgeon. Ordered to Fort Walla Walla for duty. S. O. 161, par. 3, Department of the Columbia, October 26, 1882.

Moore, John, Surgeon. The leave of absence granted by S. O. 145, C. S., Department of Colorado, extended one month. S. O. 175, par. 2, Military Division of the Pacific, November 3, 1882.

Owen, Wm. O., Jr., First Lieutenant and Assistant Surgeon. To proceed to Astoria, Oregon, and

report to First Lieutenant E. B. Rheem, Twenty-first Infantry, for duty with his command. S. O. 164, par. 5, Department of the Columbia, October 30, 1882.

REED, WALTER, Captain and Assistant Surgeon. Relieved from duty in the Department of the East, and assigned to duty in the Department of the Platte. S. O. 266, par. 4, A. G. O., November 14, 1882.

WILLIAMS, JOHN W., Major and Surgeon. Assigned to duty at Fort Cœur d'Alêne, Idaho. S. O. 161, par. 3, Department of the Columbia, October 26, 1882.

WYETH, M. C., First Lieutenant and Assistant Surgeon. To report to Fort Snelling, Minn., for temporary duty. S. O. 185, par. 3, Department of Dakota, November 9, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — **Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 18, 1882.**

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Nov. 11, 1882.	0	26	36	7	13	37	2	0
Nov. 18, 1882.	0	17	25	1	9	47	0	0

THE Lying-in Asylum (85 Marion Street) is in need of District Physicians for the lower part of the city. Applications can be made to Dr. Allen at the Asylum.

THE LATE DR. J. FOSTER JENKINS.—At a meeting of the New York Obstetrical Society, held November 7, 1882, the following report was made by the committee appointed to draft resolutions in regard to the death of Dr. J. Foster Jenkins:

We, the members of the New York Obstetrical Society, mourn with heartfelt grief the death of Dr. John Foster Jenkins, for sixteen years an honored fellow of the society.

With pleasure we recall the purity of his character and the sweetness of his life.

Highly cultivated, by nature a lover of books, and endowed with rare native ability, he represented the highest type of the scholarly physician.

Faithful in his attendance at the meetings of this society, and an active participant in its discussions, his loss from our ranks will be keenly felt, and his memory will ever be regarded by us with honor and affection.

Therefore be it *Resolved*, That we express our sympathy to his family in the time of their affliction, and convey to them our appreciation of his high personal worth, and of his generous and noble qualities.

WILLIAM T. LUSK, M.D.,
ROBERT WATTS, M.D.,
Committee.

On motion, the foregoing report was accepted, and a copy was ordered to be sent to the family of the deceased, to the *New York Medical Journal*, and to THE MEDICAL RECORD.

EX-SURGEON-GENERAL BARNES is reported to be quite recovered from the long sickness which followed his attendance upon President Garfield.

AN EPIDEMIC OF TRICHINOSIS occurred recently in Braunschweig. One hundred and ninety persons were made more or less seriously ill from eating raw pork.

DR. SAMUEL WHITE THAYER, of Burlington, Vt., recently died at his home. Dr. Thayer was born in Braintree, Vt., in 1817. He graduated at the Woodstock Medical College in 1838. He practised medicine successfully in Woodstock, Northfield, and finally in Burlington, to which place he moved in 1853. Dr. Thayer was one of the founders of the Medical College in Burlington, and was at first Professor of the Theory and Practice of Medicine in that institution. He subsequently held other chairs. He was Surgeon-General of Vermont during the war, and after the war was breveted captain. He organized the medical department of the Northern Pacific Railroad.

Dr. Thayer was a member of numerous medical societies, and was held in high esteem by his fellow members in the profession.

THE STATE CHARITIES AID ASSOCIATION AND INFANT MORTALITY.—At the recent annual meeting of the above Association the Standing Committee on Children reported that they had investigated the causes of infant mortality in the city during the hot months, and had found it to be largely due to the adulterated milk supplied to the poor.

It was suggested that there be established depots in the poorer quarters of the city, where good milk can be obtained.

There is already an organization, the New York Kitchen Diet, which might undertake some such plan as this.

THE PREVALENCE OF EXPLOSIVE KEROSENE OIL.—At the quarterly meeting of the State Board of Health, held November 18th, a report was made upon explosive oils. This showed that among one hundred and eighty-one samples of kerosene oil obtained and examined in different parts of the State, only eight came up to the required standard. There is plainly something wrong somewhere. The law is now uniform for all parts of the State except the city of New York. The charter of the city directs the Fire Commissioners to fix a standard which shall be used in testing oils. Michigan, Ohio, Illinois, Iowa, Missouri, and Tennessee, now have laws regulating explosive oils.

RIDES FOR INVALIDS.—A Boston Society engages itself in the work of providing free rides for invalids during the warm months. From last May to the present month, 1,343 persons were given rides. In addition, 1,400 car tickets, and 640 round tickets on the harbor steamers were distributed.

GANGRENE OR A BOIL.—It is known that the Hon. Thomas A. Hendricks has been reputedly suffering from senile gangrene. His life was despaired of, but he is said now to be recovering. The following not very probable story is going the rounds of the press: "On the very day, the tale runs, to which the medical prophets in attendance had limited his life, a blunt old granger—also a doctor, after a fashion—called to pay him a farewell visit. After a pathetic interview, the country practitioner thought he would take a look at the 'gangrene' which was about to terminate his illustrious friend's life. He did so; stared at it, open-mouthed, for a moment,

and then, with a derisive grunt, and an indignant, thumping oath, roared out: 'Nothing but a boil!' Sure enough, Mr. Hendricks was very soon rushing along the high road to recovery, and the able physicians who attended him are keeping moderately quiet."

PREPARATIONS OF ACONITE.—Dr. Squibb, in his *Ephemeris*, writes concerning the value of the different preparations of aconite and its alkaloid. He concludes that the fluid extract of the root is the best preparation for internal use. The dose is one minim, which may be given every three hours, or oftener if needed. For external use, he says, there is probably no form better or more convenient than an oleate of aconitia, made by dissolving two grains, or 130 milligrammes in 98 grains of oleic acid. A fluid ounce of oleic acid, weighing 412 grains, requires 8.25 grains of aconitia to make a 2 per cent. solution. Each minim of this oleate contains about $\frac{1}{50}$ of a grain, and this quantity applied locally and repeated according to circumstances, should be an efficient dosage, and should in a short time produce constitutional effects by its absorption. It should be applied to the surface by the cork of the vial, or by some non-absorbent, without friction, and about the head and face it needs no covering; great care must be taken that it does not get into the eye. In using it around the eyes this caution must never be forgotten. If applied under the clothing it should be covered with oiled silk or rubber tissue. Local neuralgias are much better reached by the dermic or epidermic method of treatment.

POISONING FROM RED STOCKINGS.—Dr. J. Woodland writes to the *Lancet* that, having had his attention directed to several cases of great irritation of the feet and legs, causing small pustules to arise and the skin to subsequently exfoliate, and suspicion being fastened upon red stockings which the patients wore, he carefully analyzed them. He found a tin salt which is used as a mordant in fixing the dye. He succeeded in obtaining as much as 22.3 grains of this metal in the form of the dioxide, and as each time the articles are washed the tin salt is rendered more easily soluble, the acid excretions from the feet attack the tin oxide, thus forming an irritating fluid.

NEW YORK'S MEDICAL COLLEGES.—The Philadelphia *Medical Times*, in an able and temperate criticism of ourselves, observes incidentally: "To be sure, a city which claims to be a medical metropolis, and yet has not a single first-class medical school within its wide domains, needs tergiversation sorely. With Harvard on the one side and the University of Pennsylvania upon the other, we wonder there is not pride enough in New York to start one school upon the higher plane. On second thought we cease this wonder, for New York did start one such school not long since, and maintained it just one year, when its stock of pride and conscience was exhausted."

Having the highest esteem for the *Times*, we regret to find that it has plagiarized us as above. We have on numerous occasions tried to excoriate the commercial institutions here which teach didactic medicine. Despite these, however, New York, we still insist, is a medical metropolis, because there are here 5,000 hospital beds, dispensaries that treat 200,000 patients yearly, and 2,000 medical students, with gentlemen who are thought competent to teach them.!

THE PROGRESS OF MEDICAL WOMEN.—The committee in charge of Blockley Hospital, says the Philadelphia *Medical Times*, recently compelled one of the attending physicians to resign for no other reason than to give his place to a woman physician.

AN AID IN PERCUSSION.—Dr. E. C. Huse, of Rockford, Ill., writes to the *Chicago Medical Journal and Examiner*: "If a couple of feet of small rubber tubing be attached to an ordinary 'finger-stall,' such as is found in most drug stores, and its tip, sewed to an elastic band, be pushed into the ear, the stalled finger will convey sounds, in percussion, where nicety is requisite, far better than the ordinary way. It is to percussion what the stethoscope is to auscultation. An apparatus (cost twenty-eight cents) which I devised yesterday worked nicely."

A STRINGENT HEALTH ORDINANCE has recently been passed by the City Council of Baltimore. The *Maryland Medical Journal* questions whether it does not go too far, and asks: "Will public sentiment submit to the removal of inhabitants of infected dwellings to more salubrious structures; to the removal of the sick to temporary hospitals; to enforcement of vaccination whenever the Health Commissioners may deem it necessary; to the report of cases of infectious diseases?"

Such ordinances may be too radical, but they at least show how awakened the lay mind has become to the demands of sanitation.

THE MEDICO-LEGAL SOCIETY held its regular monthly meeting on November 15th. Dr. J. Clarke Thomas read a paper entitled, "Death by Drowning Medico-Legally Considered." In treating of drowning from the standpoint of medical jurisprudence Dr. Thomas mentioned the Malley trial, and after reading the testimony of the various experts in the case he stated that in his opinion Jennie Cramer's death was caused by suicide, and resulted from drowning. The arsenic found in Miss Cramer's system might have been taken as a cosmetic, or possibly with intent to commit suicide. In his opinion Jennie Cramer had more motive for suicide than the Malley boys had for murder, besides which all appearances indicated death by drowning.

Nominations for officers to be elected next month were then made. Among the nominees for President were Calvin E. Pratt, of Brooklyn; Dr. William A. Hammond, and Mr. Clark Bell, the present incumbent.

THE EMPEROR OF GERMANY is reported to be suffering from a malady of a nephritic character.

TELEPHONES AS A MEANS OF PROPHYLAXIS.—It is suggested that persons wishing to visit friends who are suffering from infectious diseases in hospitals, be allowed to communicate with them only through telephone.

DENTAL.—It may not be generally known, but it is a fact worth remembering, that a small quantity of the unbleached sulphate of quinine mixed with any ordinary tooth-powder, forms an excellent quinine dentifrice, which not only preserves the teeth sound, and the gums healthy, but is found to be wonderfully efficacious for preventing toothache and neuralgia.—*Student's Journal.*

DEATH OF DAVAINE.—The well-known pathologist, C. J. Davaine, died in Paris, on October 23d, in the seventy-first year of his age. Davaine is remembered by his work on "Human Entozoa," and especially by his experiments with the anthrax-germs.

Original Communications.

NERVOUS DISEASES CONNECTED WITH THE MALE GENITAL FUNCTION.

By GEORGE M. BEARD, A.M., M.D.,
NEW YORK.

(Concluded from page 201, No. 537, February 19, 1881.)

VII.

TREATMENT OF SEXUAL NEURASTHENIA.

The treatment of sexual neurasthenia is of a threefold character.

First.—General or constitutional treatment.

Second.—Local or medical treatment.

Third.—Operative or surgical treatment.

In the majority of cases, both local and general treatment are needed; they may be employed at the same time or in alternation, and failures that attend these cases are in part due to this, that the measures used have been one-sided—the constitutional treatment to the exclusion of local treatment, and *vice versa*. The most common error is to look solely to local treatment, medical or surgical. Different cases differ very much in regard to the necessity for local or general treatment, but the law is that the general treatment, including, of course, hygiene and mental therapeutics, should constitute about three-fourths, and the local treatment about one-fourth; but this general law is only to be understood as applying to the average of a very large number of cases. There are cases not a few, where the proportion is the reverse, where treatment must be only local and incidentally constitutional. There are cases—a very small minority to be sure—where only local operative treatment is needed. These cases are indeed so rare that I am not quite sure that I have ever seen one case, but I am quite willing to admit the possibility of their existence.

The general or constitutional treatment of sexual neurasthenia is not different in principle from the other constitutional treatment of the other varieties: exhaustion of brain, of the spine, of the digestive system, are benefited by carrying out the same principles.

The general rules that are to guide us in our constitutional treatment are, as indicated in my work on "Neurasthenia," as follows:

First.—Not to place dependence on any one medicine or any mode of treatment. There is no specific for sexual neurasthenia. The cases are to be treated as cases rather than as diseases. In no form of disease, probably, are idiosyncrasies against drugs and therapeutical procedures more common or more severe than in this disease; they overthrow all our ideas of medicine and greatly disturb our prognosis. Remedies that are most familiar and most uniform in their action, and on which we are wont to rely, play tricks with us in our treatment of these states; the bromides may keep them awake or make them nervous; quinine and strychnine may depress them, while baths, cold and hot, and even massage and electricity, unless given with very great caution indeed, may irritate and weaken, rather than soothe and strengthen.

This fact, however, should be known and noted: that these idiosyncrasies undergo change with the progress of the patient from disease toward health; as they get stronger they can bear varieties of drugs and varieties of food that had been intolerable.

Second.—Frequent change of treatment is needed. The common idea that patients can wear out a mode of medication is correct, and it accords with all we know of physics, of physiology, and of pathology; patients often need a new kind of treatment as they need a new suit of clothes. In taking even milder medicines these cases should be under the, at least, occasional observation of their physician.

Third.—Occasional suspension of all treatment. The very act of treatment itself tends to keep the minds of some patients constantly on their disease, so as to interfere with their recovery; in other words, the treatment interferes with the treatment, however judicious it may be; the constant directing of their attention to their symptoms by dosing and doing, is a stronger force for keeping symptoms alive than is the action of the drugs for removing the symptoms. This is not true of all cases of this disease; it is probably not true of the majority, but it is true of some; and it is a fact to be studied in our analysis of this subject that there are persons for whom it is well for this reason alone to defer or suspend, or to modify, at least, our local procedures.

Fourth.—The recognition of the fact that hygiene and medicine are identical, and that those portions of medicine which have been classed under hygiene are more difficult to manage than medical or surgical procedures, partly on account of their inherent complexity and partly because they are more exclusively in the patient's own hands.

In my studies of this subject I find patients usually willing to co-operate with the physician in hygienic suggestions, and that the only difficulty is to find out exactly what is best and most wise for each case under all circumstances.

Under what is called hygiene come diet, work, rest, travel, marriage, change of climate. Of these it is needful to remark here only of work, rest, and marriage.

Work.—For such cases, work and the prospect of work are remedial forces; their sufferings are genuine; their pain is real pain; their weakness and depression and fear are no more imaginary than the pitting of small-pox, or the crepitus in a broken leg; but like all real physical troubles, they can be made worse by turning the mind upon them; they can be relieved by turning the mind in some other direction. For such cases employment is mental counter-irritation, acting like blisters, dry-cupping, or cautery, electricity, hot and cold baths. We are, therefore, justified in urging these persons that they continue in their business, whatever that business may be, provided it suits them; and to seek occupation if they have none, with the assurance that they will be able to fulfil the duties required of them. Short vacations, or even long ones, are not inconsistent with systematic employment; the need is to have something to look for. Giving up one's profession and business, and running off indefinitely to Europe or around the world, is usually one of the worst prescriptions that is or can be given. Very many have I seen who, in measureless despondency, have traversed seas, and mountains, and continents, sacrificing therefor property, and home, and promise of usefulness, and seeking thereby health and finding it not. Such persons are not so much diverted by travel as undiverted; they stand as watchdogs over their symptoms, never allowing them to get out of sight; counting, or trying to count, their healthward progress from day to day, like sailors throwing the log; they are inevitably disappointed, and return home oft-times broken

and helpless. Patients of this kind are allowed to take vacations, but for pleasure more than health. In travel and in all treatment, the seeking of health, though systematic and persistent, should be incidental, not the main issue—secondary rather than primary; here, if not elsewhere, he who would save life must lose it; an over-earnest and fiery desire to get well keeps us from getting well.

To all forms of neurasthenia and allied states, these general principles apply, the only exceptions being cases of exhaustion so profound that they need absolute rest in bed.

Marriage.—Marriage, like travel, is recommended for these cases by wholesale, without consideration for the claims and wants of idiosyncrasies. Marriage and non-marriage are really but two out of a large number of factors that enter into the causation and treatment of these maladies. As bad cases of sexual neurasthenia as I have ever seen have been in those who are healthily married, while in other cases marriage has been the direct exciting cause. Quite an important percentage of my cases have been married for years, and in age range between twenty and seventy. In their relation to marriage, sexual neurasthenia may be divided into the following classes:

First.—Those who are positively benefited—perhaps cured—by marriage, whether resorted to as an incident to treatment, or as the main and only dependence.

That there are such cases—that there are many such—cannot be questioned; but they are not the majority; probably, rather, they are the minority of the neurasthenic patients that are specially affected in or through the sexual organs. Every physician has seen instances illustrating this, but the inference that marriage is a specific for sexual neurasthenia is as far outside of warrant in experience, as the inference that travel is a specific for the same cases because now and then one has been profited by travel.

Second.—Those who are positively injured by marriage, or indeed, by sexual indulgence, even rarely.

With the increase of modern sensitiveness the list of this order of neurasthenics is growing longer and longer. Such temperaments are not only disappointed in the remedial power of coitus, they are directly and severely harmed by it; and if married they must live platonically if they would live in health. With these persons intercourse, frequent or rare, has no apparent effect that is salutary, and very many effects, apparently, that are annoying. These bad effects sometimes follow at once, sometimes after an interval of one or two days; in some cases they are purely local, in other cases general—reverberating through the whole body.

MEDICAL TREATMENT.

Local sedatives.—Among the remedies that have a more or less sedative effect on the genito-urinary tract, and which may therefore be employed in connection with the constitutional treatment, are the following:

Hydrastis, epigea repens, triticum repens, stigmata of maize, rhus aromaticus, eucalyptus, digitalis and digitalin, alkalies, cantharides in very minute doses, belladonna, atropia, ergot and ergotine, lupuline, camphor, bromide of camphor, gelsemin, cimicifuga.

It is not to be understood that these drugs, when they enter the system, intelligently avoid every other part of the body and rush directly to the prostate gland. It is probable that these remedies have affected the whole body more or less, but their effect can be demonstrated in some cases more readily and satisfactory on the genito-urinary tract, when it is in a condition of inflammation, congestion, irritation, and exhaustion.

The differential action of large and small doses is very noticeable in the use of cantharides and belladonna, large doses of these remedies being, as all know, very irritating at the neck of the bladder, while small doses are soothing.

General sedatives.—Among the remedies which have a general sedative effect in neurasthenia, but no special sedative effect on the genito-urinary tract, are:

Physostigma, the bromides of sodium, ammonium, lithium, potassium, calcium, and hydrobromic acid, glonoin, scutellaria, cypripedin, cannabis indica, lactucarium, hyoscyamus and hyoscyamin, conium, convallaria.

Substitutes for bromides.—It is quite important in many cases to find some sedative remedy or combination of remedies that have the good effect of the bromides, in a more or less degree without their injurious effects. The above list contains good substitutes.

There are two classes of patients for whom it is not well to prescribe bromides. First, those who are kept awake instead of being put to sleep by them, or with whom in some way they do not agree. The number of those who cannot get some benefit of a temporary character from bromides is small. Second, those who have already taken the bromides too long—who have been thereby weakened and impoverished. The bromides, like all the other great remedies, are abused on account of their very value; they do so much that they are ordered to do everything. In this respect the history of the bromides is like that of mercury, counter-irritation, opium, and the like.

General tonics.—To depend on general tonics, even the very best, for the cure or important relief of sexual neurasthenia is to make disappointment sure. If iron and quinine, salicine, phosphoric acid and muriatic acid, and strychnine, arsenic, coca, quassia, calumbo, phosphorus in all its forms, the salts of zinc and silver could cure this trouble, then all cases would be quickly cured; for almost all use some of these remedies, or all of them, often in large doses and for a long time; and sometimes with a degree of benefit up to a certain point, sometimes with clear evidence of injury.

There is, indeed, no specific, or any approach to a specific, for sexual neurasthenia any more than for the other varieties; it is not by any one remedy or by any prescription, simple or compound, that we obtain the result. All the above-named tonics are good; some of them are most excellent, but none of them can be trusted as even a chief means of cure; these tonics are to be used oftentimes in connection with sedatives or in alternation with them; they are in some cases to be withdrawn absolutely, in other cases the dose must be reduced very greatly; there are persons who are made worse at once by the use of these tonics, at least when given in the average dosage.

In most cases of neurasthenia and in all varieties the stomach suffers first or last, and this fact must be considered in giving medicine. I usually give both tonics and sedatives well diluted, and begin with small doses. Where large doses are given it is with the understanding that they are to be taken a short

time, with intervals of rest for the stomach and nerves, and at the outset, at least, one must be ready always to give up even a choice and favorite prescription when it does not agree, or seem to agree; doubts are often best solved by withdrawal and then returning again, carefully watching the effects.

I have faith in the objective power of drugs apart from the action of mind on body—the expectation of the patient. I believe we can relieve and cure, or aid in the cure of disease by medical substances introduced into the system, just as we can induce disease in the same way, even when the patient does not know he has taken anything or just what he has taken or just what effects to look for. This creed is inconsistent in no way with the admission and declaration for which I have always contended, and the truth of which I have demonstrated by special experiments, that mental therapeutics is the most important of all therapeutics, and that mental force is the strongest single force that nature gives us in our conflicts with bodily disease.

I have faith, justified by observation, in very large doses of some remedies for some patients, in some conditions, for a short time and for an effect that small doses, though repeated often, cannot give; and have also faith, justified by observation, that often repeated very small doses of some remedies, for some patients in some conditions for a short time or for a long time, have an effect quite different, radically different, from the same remedies in large doses, and it is not inconsistent at all that in the same patient both large and small doses should be given.

Mental therapeutics.—There is no form of neurasthenia and no form of disease, nervous or inflammatory, where mental therapeutics, under the vague and elastic and unfortunate phrase "moral treatment," is so often tossed off as a prescription as in sexual neurasthenia.

Mental therapeutics, the turning of the patient's own mental force on his body for the purpose of relieving or curing disease, is important in this disease as in all other diseases, but there is no proof that it is of more or greater value in sexual neurasthenia than in other varieties of neurasthenia or in other forms of functional nervous disease. Even in organic disease of the brain or of the spinal cord, mental therapeutics is a powerful and an almost incredible means of temporary relief.

The mind of the patient in sexual neurasthenia can be therapeutically utilized both positively and negatively.

In the first place, we can assure such patients that their disease is relievable and curable. This assurance, which is based on the history of cases, is itself a curative force co-operating pleasantly and powerfully with whatever else we may do.

The history of these cases gives us a right to predict a bright future—which they especially fear will be impossible—provided they break up any evil habits and conform in a reasonable way to the local and hygienic treatment required. Some cases of a milder sort recover spontaneously under time and hygiene. In bringing, therefore, the element of hope to bear in these cases we are simply making use of experience, and the larger one's experience, the longer we keep sufferers of this disease under observation, the more hopeful on the whole we become, and in acquainting our patients with this fact we are both giving them information and helping to cure them. The prophecy is an aid to its own fulfilment. There are, probably, few forms of disease where symptoms are so distressing and so long standing that are so sure of relief as these cases, under right management, even in the most hopeless forms of the disease. Where there is, or appears to be, a wreck of all the faculties, and the whole man seems to be going to pieces, help can be secured in time by patient and sensible use of therapeutical measures—a relief that is both agreeable and tends to become more prominent with age.

Second, drawing off the mind of the patient from his disease by mental or physical work.

There are cases of neurasthenia in both men and women that need entire freedom from physical or mental toil, but the victims of this special form of neurasthenia do better, as a rule, to be employed in something that at once sustains their ambition, engages their thoughts, and gives them visible encouragement that they are not wholly disabled, nor likely to be. Better to stop the safe side of fatigue; but occasional excessive exertion is preferable to sustained, moody, and hopeless inaction, since one can more quickly rally from a single indiscretion than from a steady course of evil hygiene.

Muscular exercise is better than mental; it draws off more thoroughly from the sexual centres; it is sedative, where sometimes intellectual exertion is exciting. For man or for woman muscular exercise of some kind, or of many kinds, is, indeed, the best known relief for the irritating and morbid sexual desire that so often attends sexual debility.

LOCAL TREATMENT.

The methods of local treatment of sexual neurasthenia are quite numerous. Many which I have tried and discarded, because they either failed or are less useful than other methods, I shall not mention here.

Those which I use and commend are the following:

Localized electrization by external and internal applications.—General electrization in the forms of central galvanization and general faradization is of the highest value as a general sedative and tonic, and as such belongs under the head of general treatment. On this I have nothing to add beyond what has already been said in other writings on this subject in this country and in Germany and England.

Electricity may be applied to the male genital organs in various ways, and by both currents—galvanic and faradic.

First.—One electrode in the rectum and the other in the urethra, both insulated nearly to their tips. In this method *very mild* currents must be used, since the tips of the electrodes come very near together, the tissues are very moist, and there is but slight resistance to the current. This is good treatment for gleet and prostatorrhœa.

Second.—One insulated electrode in the rectum and the other externally at the perineum, or between the penis and scrotum, or over the pubis, and on the inner side of thighs. In this method very strong currents can be used.

Third.—One pole connected with an uninsulated sound in the urethra, and the other on the thighs or on the spine. Strong currents can be borne in this method also.

In this method the mechanical effect of the sound is combined with the special effect of the electricity. I have devised a clamp for connecting the electricity with the sounds.

Fourth.—Purely external applications, one electrode pressed firmly on the scrotum, the other on the spine or the back of the neck, or on the inner

sides of the thighs, the nerves of which affect reflexly to the general apparatus in a powerful way.

Fifth.—One electrode at the perineum, the other up and down the spine.

In the above method of application, both currents may be used. I use the faradic more than the galvanic. For the gleety blennorrhœal discharge that often accompanies sexual neurasthenia, I prefer the insulated electrode and the galvanic current.

Sixth.—Drawing off sparks on the spine and the genital region by statical electricity (franklinization).

The use of statical electricity (franklinization) is necessarily felt all over the body, and is really a form of general electrization;[1] but it is especially more powerfully felt on or near where sparks are drawn, and by this method very powerful local impression may be made. In these applications the patient sits on an insulated stool, and there are a variety of electrodes that I employ in the applications. I make frequent use of the electric wind in these as in other forms of nervous diseases.

Comparing franklinization with galvanization and faradization, I should say that the average results of faradization are preferable; but there are individuals who are specially benefited, or seem to be specially benefited, by franklinization, and *vice versa*. I therefore make considerable use of it as an alternate to general faradization. It is certain that most sensitive persons can be franklinized without discomfort and without fear, and without any unpleasant after effects.

In using any form of electricity, we have to guard against too long, too strong, and too frequent applications; but we are not to be alarmed if a drop of blood should appear after an internal application, and we are always to abandon or suspend or modify the applications when they seem to disagree.

Soluble bougies and cupped sound and powders.—The familiar devices have never fulfilled my hopes; and as the other plans described here do better, I have fallen into the habit of making less use than formerly of even such a good remedy as iodoform in the shape of soluble bougies, or in an ointment for the cupped sound. The more common remedies, such as sulphate of zinc, seem to do but little except for some intercurrent attack of urethritis.

The powder of iodoform can be introduced into the urethra by a tube with a sliding wire and bulbous extremity.

Sound.—The history of many of these cases is a history of disappointment in the use of sounds. Treatment that is only local, however varied, most usually fails; but exclusive dependence on the introduction of sounds is, of all measures, disappointing for all cases of general sexual neurasthenia—that is, cases in which the brain and spine and digestive system have become involved, as well as the genital organs. That the sounds, by their mechanical influence, are a help in some cases, mainly of a local character, even when there is no stricture, has been shown long ago, and by many observers; but they do very little that is desired or promised of them. Now and then a good and strong effect is noticed after large sounds have been used; but this is often temporary, or is appreciated only in some one symptom, as impotence; whereas large numbers of persons use the steel and flexible sounds faithfully without profit, and sometimes to considerable harm.

Very sensitive urethras cannot bear steel sounds, even when introduced cautiously and kept in but a short time; increase of the sensitiveness, and sometimes discharge, are the results. Not only for the patient, but for the physician, the flexible sounds are less irritating.

All of these criticisms apply mainly to the treatment of those cases where there is no stricture.

Local baths and douches.—From cold sitz-baths I see little good in the class of cases to which these papers are devoted. The experiments are made on an extensive scale; almost every one tries them.

Hot sitz-baths, taken at night, injure less and help more, but some are so sensitive as to be weakened by them, while in other instances the effects are negative or doubtful.

From douches to the spine and back of the neck, with hot water or cold water, or an alternation of hot and cold, there is more satisfaction than from bathing. These douches, however, should be managed with prudence; the chief point being to avoid using them too long at a time. Some are made chilly by a very short douche of cold water; a minute is a long time when a stream of cold water is falling from a height on the back; a fraction of a minute is all that many nervous patients can bear.

Horse-hair mittens used thoroughly and daily all over the body are a good substitute for baths and douches, and may well follow all water applications.

Rectal treatment.—The prostate gland, when in an irritable condition, can be affected through the rectum, in some cases with less disturbance than through the urethra. Injections of ergot, of aqua bismuthi, of hamamelis, of hot water, and bromide of sodium, are sometimes most useful, not only when piles exist, but when there is heaviness, aching, oppression in the rectum after walking.

Suppositories of many kinds I have used—iodoform, valerianate of zinc, ergotine, belladonna, and so forth, but the injections seem to do better, save in those cases, quite rare, where the rectal pain is severe enough to require morphine.

The irritable rectum requires, in fact, substantially the same treatment as the irritable urethra.

Cauterizing and soothing injections.—The injection of a small quantity of a solution of nitrate of silver, is good treatment for the prostate urethra when used cautiously and occasionally; but it is not a specific or sole dependence for these cases in any sense. I should never think of relying upon it in any case, and there are no cases that require its frequent use. I see no harm, but much benefit, from these injections in my practice: but I do not depend on them only, and in many cases get along without them. The painful urination and desire for urination and discharge of blood that follow these injections, are not serious symptoms. In a day or two they pass away; but if they should be serious they could be relieved by opium and warm sitz-baths.

Lallemand's porte-caustique is not well borne by

[1] The German literature of general faradization is now extensive, and is increasing. Among the more recent writings on this special mode of using electricity are the following: Erb's Handbuch der Electrotherapie; Stein's Allgemeine Electrization des Menschlichen Körpers (including general faradization, central galvanization, the electric bath, and franklinization); Möbius: Ueber Allgemeine Faradisation, Berl. Klin. Wochen.; Fischer: Ueber Allgemeine Faradisation, Arch. Psychi., xii., 3, 1882; Engelhorn: Ueber Allgemeine Faradisation, Centr. Bl. Nervenheilkunde; Maierfisch: Ueber Allgemeine Faradisation, Schweiz. corr., B. xi., p. 221, 1881; Väter: Review of Erb, in Allgemeiner Med. Zeitung. Möbius has just published a *résumé*, wonderfully thorough, even from a German point of view, of the literature of this and other points in electro-therapeutics gleaned from all the languages, under the title Ueber Neuere Electro-therapeutisch Arbeiten. Some of the above references are taken from the monograph of Möbius, which has just reached me. Möbius also gives a *résumé* of the recent and important literature of statical electricity.

the modern nervous constitution, certainly not by the American constitution, but a strong solution of nitrate of silver, even much stronger than one-half a drachm, in *small quantities*, can be tolerated by almost every one.

Besides nitrate of silver I use injections of hot water and the bromide of sodium in the urethra. The hot water is of great value for all mucous membranes, from the nasal passages to the penis and the urethra; it is good for nasal catarrh, or gastric catarrh, or intestinal catarrh—for piles, and for urethral catarrh. The difficulties in applying hot water to the urethra are numerous; first of all the double catheter, with holes near the end, is likely to cause irritation of a mechanical kind by the contact of the edges with the mucous membranes; then the catheter itself with a stream of hot water passing through it soon becomes painfully hot. I had a double catheter of this kind constructed, and soon gave up its use on account of these difficulties, and I now use the flexible catheter above described. With this catheter one can inject a small quantity of hot water into the deep urethra. The quantity of the injections are small, but can at any time be repeated. The bromide of sodium injections I find very excellent for soothing and sedative effects. I use a solution of one part to fifteen of water. For the frequent condition of great hyper-sensitive urethra, the bromide of sodium injections are very excellent and admirable; they can be used frequently, once a day or oftener.

Counter-irritation: small blisters, cupping, and cautery.—There are various ways for using counter-irritation effectively: the use of very small blisters to the spine, as described in my work on "Neurasthenia;" dry-cupping on a large scale, wet-cupping, and the actual cautery.

Counter-irritation to the perineum by means of the nitrate of silver or iodine has disappointed me. If severe, it annoys; if mild, does little good. The judicious and careful use of small blisters is preferred, in the manner elsewhere described,[1] to the perineum and to the under portion of the penis, and is rewarded by a relief of the symptoms of prostatic irritation that cannot always be obtained by other means. The philosophy of this method of treatment in prostatic irritation is the same as in local irritation of other parts, as in spinal irritation, cerebral irritation, nervous dyspepsia, neurasthenic eye, and so forth, all of which conditions are analogous in pathology, in history, in philosophy, to irritation of the prostate, and very often associated with it. On this subject Mr. Milton, of London, writes very intelligently.

The success that follows this mode of local counter-irritation depends largely on the details, on the judgment of the physician, and the good sense of the patient. To do permanent good, the treatment must be kept up, off and on, for some time, and in order that it may be kept up for a long time it should be conducted so as not to severely annoy or interfere in any way with daily duties.

Dry-cupping seems to be useless unless it be carried out with more emphasis and thoroughness than is the custom; but when practised on a large scale, and maintained systematically, like electrization or hydro-therapeutics, it is of much value. It should be applied not only to the spine but to the thighs and perineum. One of my patients has lately constructed an apparatus for dry cupping, which seems to be superior to anything I have seen. If it fulfils its promises it will in time be described and illustrated.

The cautery of the Paquelin or the galvano-cautery I often use just before the application of the small blisters, placing the blister-plaster directly over the parts cauterized.

[1] Neurasthenia, second edition, p. 170.

SURGICAL TREATMENT.

The surgical treatment of that class where surgery is required as an addition to medical treatment has been discussed elsewhere.[1]

Sexual neurasthenia occurs in those who have and those who have not phimosis or redundant foreskin, in Jews as well as Gentiles, in those who have and in those who have not stricture or narrow meatus. In regard to the relation of these conditions to nervous disease, these three propositions are demonstrable:

First.—Persons who have very strong, old-fashioned constitutions are rarely or never injured in the nervous system, locally or generally, in any important degree, at least by phimosis or redundant foreskin, or by stricture or narrow meatus.

Second.—Persons who are only moderately sensitive may in time suffer from these conditions, locally chiefly, and in the different degrees of impotence and spermatorrhœa. With this class of persons, however, years may elapse before even these local effects are noticed.

Third.—Persons who are very sensitive nervously, and especially Americans, living in our American climate, are liable to develop all or many of the symptoms of sexual neurasthenia under the exciting influence of any one of these conditions. The phimosis or the stricture alone could not have excited the nervous disorder, except when co-operating with a temperament previously made sensitive by exhausting climate,[2] work, worry, tobacco, alcohol, traumatism, or excesses.

The consideration of these propositions will help to answer the question, whether, in any case, surgery is to be added to medicine.

Out of 192 of my cases of nervous diseases, including neurasthenia in all its varieties, epilepsy, etc., there were 60 cases of phimosis or redundant foreskin, with or without smegma. Of these 60 cases, 16 were circumcised, but in no case was the operation the only dependence, but was used in connection with medical treatment, local and general.

A NEW VEGETABLE STYPTIC.—During the French expedition to Mexico, a plant was discovered, called by the natives by a name which may be rendered as "Fowlwort" (*trandescantia erecta*). This had the property, when given internally, or even chewed, of stopping hemorrhages. Specimens have been cultivated, says the *Lancet*, at Versailles, and retain their native properties. It is asserted to be the most powerful styptic known.

[1] Medical Bulletin, p. 248, 1882.

[2] In my "American Nervousness," chap. iii., the climate of America as a cause of neurasthenia is considered in detail, with especial reference to degrees of the air and extremes of heat and cold. Very recently an Englishman, Matthieu Williams, has written in confirmation of these views. He speaks of the "desiccated Englishman" and of "Americanitis"—an equivalent to nervousness. In the same line were the results of Mr. Herbert Spencer, on American overwork. The work of Möbius, of Leipsic, on "Neurosität," may also be consulted.

Some of the later writers, including Mr. Spencer, err in assuming that the trouble is only American. The whole civilized world is suffering in this way; the American, mainly for climatic reasons, being only about a quarter of a century in advance of Europe. At the present time there is a larger literature of this subject in Germany than in America.

THE RECORD OF A CASE OF

GUN-SHOT INJURY IN THE CLAVICULO-SCAPULAR REGION,

TREATED BY PRIMARY ANTISEPTIC OCCLUSION, WITH A SINGLE DRESSING.

BY H. I. RAYMOND, M.D.,

ASSISTANT SURGEON, U. S. ARMY.

FOLLOWING in the wake of cases cited in my recent article to THE MEDICAL RECORD on "Primary Antiseptic Occlusion in Military Practice," I desire to record this case, the next in the short series occurring in my military practice in Arizona. Thus the case will not be an isolated one, but will afford confirmatory evidence of the applicability and practical results of the "occlusive method" in gun-shot wounds, as urged in my former article. I report this case without waiting for others to accrue, because the case is exemplary and yet remarkable, in that, although a serious gun-shot injury in a region well supplied with lymphatics and other absorbent vessels, the temperature did not average a degree above the normal, and the primary dressings were not removed or disturbed from the time of their application, at ten o'clock on the night of the shooting, immediately after reaction from shock, until healing of the wound-track was practically accomplished. Six and one-half days after receipt of injury I removed the primary dressings and found the track of the wound filled with granulation-tissue and closed almost up to its mouths. Nature, in such an incredible short space of time, had converted a serious gun-shot wound into two ulcers, one at each end of the track. I dressed these with iodoform and salve, as one would any simple ulcer, and desisted from measuring the depth of the ulcers until the following morning, when Dr. C. H. Allen, my associate at this post, would be present to verify my measurements. Seven and one-half days after receipt of injury Dr. Allen took a Nélaton probe, well carbolized, to determine at what depth in the wound-track it would meet with firm resistance from granulation-tissue. The track of the wound originally was five inches from the entrance to exit, as ascertained by external measurements on a plumb-line. The depths of the ulcers, as ascertained by Dr. Allen and verified by myself, were at entrance of bullet three-fourths of an inch, at exit of bullet, one-fourth of an inch.

The primary dressings in this case were removed as early as the seventh day, as a tentative measure toward determining the shortest time requisite for the process of repair. In the case of a gun-shot wound of the leg, inflicted by a ball from a revolver of 45 calibre, the wound-track being eight inches in length, I removed the primary dressings on the tenth day, and found the track completely filled with granulation-tissue. I would not recommend that the dressings be removed under ten days if no contra-indications arise.

Of course, the progress of repair in any given case will depend largely upon the vascular supply of the part and the quality of the blood, with other conditions which physiological histologists can point out for us.

The history of the case is as follows: Geo. R——, an American, aged thirty-four, by occupation a packer, subject to occasional sprees, was, while intoxicated, shot by a drunken comrade, at close range, about ten o'clock on the night of October 26, 1882. The bullet, projected from a carbine, was of 45 calibre. The wounded man was borne to the hospital, a distance of eighty rods, by two soldiers. On admission into the ward considerable oozing of venous blood was taking place from the wounds of entrance and exit, the former almost immediately subclavicular at the junction of the outer with the middle third of clavicle, the latter immediately supra-scapular and extra-articular. The wounds were on the left side of body.

The numerous lymphatics in the cervical cellular-tissue and the patulous mouths of the injured veins stood like so many eager nestlings, quickly receptive of any infecting entities that might be brought to them by the surgeon's probe or digit, or in anywise whatsoever.

Treatment.—October 26th, 10 P.M.: Hemorrhage, mostly venous, was arrested by compresses to the wounds of entrance and exit, secured by a figure "8" roller bandage about the shoulders. The compresses were soaked in a solution of carbolic acid 1 to 20, and the superficies of the wounds were cleaned with the same before their occlusion by the compresses. This dressing was applied by Dr. Allen before my arrival, and had he not thought that I would probably remove this primary dressing in the morning, he would (as was our custom) have dusted iodoform upon the wounds previous to their occlusion.

Dr. Lloyd, of the army, was present at the dressings. Shock was relieved by external heat, whiskey internally, and ℥x. hypodermically of a mixture of Magendie with a solution of atropine: ℥x. representing ¼ gr. of the former and $\frac{1}{16}$ gr. of the latter. Fearing the lung might possibly be involved, this hypoderm was repeated occasionally during the first three days of treatment.

October 27th (first day), 9 A.M.—Pulse 98, well sustained; respiration 21, of good character; temperature 99½° per orem. No pain in arm or shoulder when at rest. Patient relishes cold rich milk. Ordered a glass q. six hours. Quinia sulph., grs. x., night and morning. Tr. ferri chlorid., ℥xv., t.i.d.

The compresses and two layers of the bandage were found saturated with blood which had oozed out and dried during the night. There being no indication for a removal and reapplication of compresses—the wound smelling sweet, and the temperature scarcely more than a degree above the normal—the primary dressings, though saturated with blood, were not disturbed, but as a precautionary measure the compresses were made to take up an antiseptic wash of boro-glyceride and iodoform.

Memoranda.—October 27th (first day): primary dressings undisturbed, but saturated with an antiseptic wash as a precautionary measure.

October 28th (second day).—Practically nothing done, dressings not touched. Odor sweet.

October 29th (third day).—Nothing done with respect to the wound. Tongue moist; appetite good.

October 30th (fourth day).—Dressings in *statu quo*. No indications to do anything; nothing done; food relished.

October 31st (fifth day).—Absolutely nothing done; tongue moist; appetite hearty.

November 1st (sixth day).—Faint smell to the bandages. The compresses again saturated with a solution of boro-glyceride, 1 to 10, to which was added a little iodoform; dressing not disturbed.

November 2d (seventh day).—Dressings removed for the first time. Entrance and exit of bullet dressed like two ulcers. Wound practically healed.

November 3d (eighth day).—Depth of ulcers at each end of wound-track ascertained. At entrance,

three-fourths of an inch; at exit, one-fourth of an inch. Original length of wound-track, five inches.

November 6th (eleventh day).—The posterior ulcer has granulated to the surface level. The anterior one is gradually filling up with granulation tissue. The temperature and pulse are within an ace of the normal.

Thus it appears that one does less and accomplishes more by this "do-nothing" method, in any case to which it is applicable, than by any other manner of procedure known to the profession.

INFLUENCE OF DOSE ON THE ACTION OF REMEDIES.*

By H. B. HEMENWAY, A.M., M.D.,†

KALAMAZOO, MICH.

It has been observed from very early times that drugs administered in large doses often have apparently the reverse effect from that which is produced by small quantities of the same medicamenta. Many references might be given to substantiate this assertion. One quotation must suffice. Hippocrates gave this prescription for mania: "Give the patient a draught made from the root of a mandrake, in a smaller dose than sufficient to induce mania." Nearly a century ago a German physician, having noticed the apparently conflicting result of large and small doses, propounded that highly erroneous so-called law, "*similia similibus curantur.*" The most common explanation of this law among his followers at the present time is summed up by them in the words "*action*" and "*reaction.*" They say that a drug has a certain action upon the human system. This action the "forces of nature" try to counteract. Large doses show the *action* of the poison. Nature, however, is more powerful than small doses, and when they are given, the *reaction* of nature is seen.

If this theory is correct, there must be one point where the action and reaction are equal and the effect *nil.* On either side of that point the dose would be effective in proportion as it was distant from the point. Since this is not the case, we must of course discard the theory. Moreover, is nature a thinking entity?

The foregoing remarks are called forth by an article by Professor Bartholow, published in the *Medical News*, August 26, 1882, p. 227. He there states the law, "To every action there is an equal and opposite reaction," meaning thereby that as the result of over-stimulation a sedative effect is produced. While recognizing the authority with which he speaks upon such themes, and admitting that there is some truth in the so-called law, the majority of students in the profession must still differ with him as to the breadth of its application.

First look at the oft-mooted subject, *alcohol.* The effect of small doses seems to be stimulant; but is it really so? True, after taking a drink of wine a man will lift a greater weight than before. Though exhausted before, he will return to his work with renewed vigor apparently. The word apparently is used, for in a communication read before the American Medical Association, about 1855, Dr. N. S. Davis clearly demonstrated that this result is reached by its anæsthetic effect. Dr. H. C. Wood says ("Therapeutics, Materia Medica, and Toxicology," p. 118): "It is scarcely doubtful that alcohol acts upon them as does ether," speaking of the nervous centres. A man stops lifting, not because he has reached the limit of his strength, but because pain is produced, showing that should he lift much more he would be in danger of injury. If that pain is deadened, so that he cannot feel it, he will lift heavier weights. After taking a drink he does not mind the cold of winter nor the heat of summer, and as a result, attention is called to the fact that most of those overcome by heat in summer, or frozen to death in winter, come from the class using alcoholic stimulants, so-called. Increase the amount of liquor taken and the sedative effect is seen not only in the æsthesodic, but also in the kinesodic system. Apparently the effect is the reverse with large and small doses. In reality the difference is one of degree only. Professor Bartholow refers to its action on the heart. He says: "Alcohol may increase the action of the heart in two modes: by a reflex impression, having its origin in an excitation of the nerve endings in the stomach; or by its own oxidation or combustion in the organism, yielding a force which is utilized by the cardiac motor apparatus." If the last is the true explanation, it might reasonably be expected that a larger dose would give more strength, which is contrary to fact. Since the inhibitory nerve of the heart and the sensory nerve of the stomach are parts of the pneumogastric, stimulation of the stomachic fibres would cause a slowing of the heart's action. In order to produce quickened pulsations by action on the sensory nerves of the stomach, they must be anæsthetized, not stimulated. In this condition arterial pressure would be greater because of increased heart's action. When a larger dose is given the heart's action is slowed by stimulation of the inhibitory centre. The pulse is weakened by the direct influence of alcohol upon the heart-muscle, as may be proved by injecting it into the jugular vein.

In *digitalis* poisoning is cardiac paralysis due to over-stimulation of the cardiac muscle, as Professor Bartholow implies? The record of experiments with this drug indicates that generally death occurs with systolic arrest. The increased strength of the heart's action is due to the direct influence of the digitalin upon the cardiac muscle. Slowing of the beat is the result of stimulation of the peripheral cardiac inhibitory apparatus, and of the vagi. Rudolf Boehm (*Pflüger's Archiv für Phys.*, 1872), asserts that cardiac arrest in diastole never occurs in digitalis poisoning after the vagi have been cut. I assume this to be true, since I have never been able to find testimony to the contrary. The most reasonable explanation of those rare cases of diastolic arrest, therefore, is not exhaustion of muscular energy, but unusual stimulation of the pneumogastric.

Without doubt, exhaustion is an important element in the production of paralysis in *strychnia* poisoning; but we must not forget that the experiments of Buisson, Martin-Magrow, and others clearly demonstrate that the drug has a paralysant action upon the motor nerves. Now, Professor Bartholow himself says, that when very large doses of strychnia are injected into frogs, there may be *no convulsions.* In such cases, evidently, the paralysis cannot be due to exhaustion of irritability, but to direct paralysis of the motor nerves. The convulsions are generally agreed to be mainly, if not entirely, the result of the action of the alkaloid upon the spinal cord.

Another example of apparently opposite actions of a drug is found in *belladonna.* Small doses increase the frequency of the pulse and cause a *rise* of arterial pressure. Large doses also quicken the

pulse-rate, but *lower* arterial pressure. Small doses increase the action of the heart by paralysis of the vagi, and by stimulation of the accelerator nerve-centres or nerves. The increased vasculur pressure is the result of increased heart-action and stimulation of the vaso-motor centres. The decrease in vascular tension, when large quantities of atropia are exhibited, is due to (1) the continued rapid action of the heart, thereby preventing its complete filling before contractions; (2) the direct depressant effect upon the heart itself, as shown by the experiments of Bezold, Bloebaum, and Botkin; (3) its paralysant action upon the muscular coats of the vessels. That this last is not the result of super-excitation, but of the direct action upon the vessels, may be seen from the fact that atropia applied to the web of a frog's foot causes dilatation of the vessels without their previous contraction, if the skin has been broken.

The foregoing are a few of the many possible illustrations of the fact that to the superficial observer the effects of large and small doses of medicines seem to be reverse, the one from the other; but a more minute examination shows that in reality the differences are those of degree rather than of kind. While this may not be true in all cases, it certainly, so far as our present knowledge goes, is true in very many instances.

In view of these facts, it is greatly to be regretted that our writers of works on the practice of medicine are not at all explicit in stating *exactly* the size of dose, how administered, and how often, as well as the name of the remedy to be used.

It may not be out of order right here to say that, for constitutional effects, in acute diseases especially, small doses given once in one or two hours have more uniform and favorable results than when the same quantity per twenty-four hours is given in three or four doses. Furthermore, very often when small doses are given frequently, it takes less of the drug to produce the desired results than when it is administered according to the old plan *ter in die*. The quantity taken can be better regulated, and after-results are not so likely to annoy the physician as formerly.

PHILADELPHIA HOSPITALS.—The superior skill of Philadelphia surgeons is attested in the following paragraph, which we extract from the *Chicago Medical Review*:

"According to a local paper, a man who had been carried to a Philadelphia hospital while suffering from the effects of a severe contusion, was asked if he had been treated kindly while there. 'Considering all things,' he answered, 'I have no right to complain. They amputated both my feet, removed my clavicle, cut off my right arm, trephined me, took out a piece of my inferior maxillary, sawed my left os innominatum in two, and were about to exsect five or six ribs, when a fire broke out in the establishment, and the police got away with the rest of my body in safety.'"

This simple, straightforward, and temperate statement of facts carries conviction with it; but had it been made by any other than a Chicago man, we could scarcely have credited it. We have also learned that George Washington's hatchet and original cherry-tree are now in the possession of the victim, and will be sold cheap, for cash, for the benefit of his widow, should he die from the original contusion.

Progress of Medical Science.

ALTERATIONS OF THE CORD IN PHOSPHORUS POISONING.—The results of the researches of Dr. Danillo (*Gazette Méd. de Paris*, 1882) on this subject are as follows: 1. The alterations of the spinal cord in phosphorus intoxication must be placed in the class of myelites, either central or diffused. 2. In cases of acute poisoning, the central nervous system contains deposits of pigment of hæmatic origin. This has, heretofore, not been noted. 3. Large doses of phosphorus give rise to a central myelitis, along the whole length of the cord, with the formation of extravasation and pigment. Smaller and repeated doses give rise to a diffused myelitis, affecting the gray and the white matter. 4. Phosphorus thus presents us with a powerful means by whose aid we may excite, at will, an inflammatory irritation in the spinal cord, either localized in the gray matter, or diffused, that is occupying both the white and the gray matter at one and the same time. 5. A certain number of morbid nervous phenomena, observed during life, are to be attributed to the effects of one or the other of these two kinds of myelitis.

THE CEREBRAL SEAT OF SUICIDAL AND OF HOMICIDAL IMPULSES.—M. Voisin has written a memoir in which he endeavors to establish that suicidal ideas in the alienated are due to functional troubles and to lesions, having their seat in the most internal parts of the ascending and parietal convolutions, and moreover that the dangerous impulses to suicide, homicide, and violent acts have their origin in these convolutions.—*Gazette des Hôpitaux*, August, 1882.

THE PROGNOSIS OF DIABETES.—From a consideration of six hundred cases of diabetes, which have come under his personal observation, Dr. Schmitz, of Neuenahr, feels justified in formulating the following conclusions: Prognosis depends upon, 1, the earliness of the discovery and treatment of diabetes; 2, the strictness with which the anti-diabetic regimen is observed; 3, the etiological factors; 4, the age of the patient; 5, the degree of immunity the patient enjoys when he chances to use sugar-breeding food. In early cases the prognosis is favorable. Diabetes depending on central nervous lesions or on grave chronic affections is serious: depending on worry, pain and grief, or on over-use of sugary food, it is less so. Gouty diabetes has the best prognosis of all. After the age of thirty the pronosis grows steadily worse. It is bad if sugar persists on an exclusive diet of fish and flesh. It is decidedly favorable if eggs, salads, and mild cheese can be taken without breeding sugar, which only reappears when fruits, starchy roots, starch, or cane-sugar are taken.—*Wiener med. Wochenschr.*, No. 11, 1882.

THE NUTRIENT TREATMENT OF INSANITY.—"The greater my experience becomes," writes Dr. Clouston (*London Practitioner*, August, 1882), "I tend more to substitute milk for stimulants. I don't undervalue the latter in suitable cases; but in the very acute cases, both of depression and maniacal exaltation, where the disordered working of the brain tends rapidly to exhaust the strength, I rely more and more on milk and eggs made into liquid custards. One such case this year got eight pints of milk and sixteen eggs every day for three months,

and under this treatment recovered. I question whether he would have done so under any other. He was almost dead on admission, acutely delirious, absolutely sleepless, and very nearly pulseless. It was a hand-to-hand fight between the acute disease in his brain and his general vitality. If his stomach could not have digested and his body assimilated enough suitable nourishment, or if he could not have been taken out freely into the open air, he must have died. But to-day he is fulfilling the duties of his position as well as he ever did in his life. All acute mental diseases, like most nervous diseases, tend to thinness of body, and therefore all foods, and all medicines, and all treatments that fatten, are good. To my assistants, and nurses, and patients I preach the gospel of fatness as the great antidote to the exhausting tendencies of the disease we have to treat, and it would be well if all people of nervous constitution would obey this gospel."

Oil of Peppermint in Zoster.—Dr. Meredith says that he has found the oleum menthæ pip. more effective than any other form of anodyne application he has tried in allaying the neuralgic pains so often piteously complained of in cases of herpes zoster. These distressing pains, worse in elderly people, are complained of often when the eruption has disappeared; but painting the affected parts over with oleum menthæ pip. nearly always affords speedy relief. He has painted the oil over the eruption when it was out in a fresh florid condition, and that with great relief to the patient. The value of this application in pains of neuralgic character deserves to be better known than it is.—*London Practitioner*, August, 1882.

Hot Water in Nausea and Vomiting. — Dr. Morton says, in the *Louisville Medical News*, that several years ago he learned from his own personal experience that no agent relieves nausea and vomiting so satisfactorily and promptly as water, as hot as can be drank. Since then he has used it in a large number of cases, and no remedy that he ever administered in any condition has proved more uniformly reliable. He has preserved records of many of these cases, and makes the following classifications: 1, cases in which nausea and vomiting occurred at the onset or during the course of acute febrile disease; 2, cases in which these symptoms were caused by overloading the stomach when its functions had been impaired by protracted disease; 3, cases in which they were produced by nauseous medicines (not emetics) at the time they were taken; 4, cases of acute gastritis caused by the ingestion of irritants; 5, cases in which these symptoms were purely reflex; 6, cases of chronic gastritis; 7, cases of colic in newly born infants; 8, cases of flatulent distention of the stomach in adults.

Burnt Alum in Ague.—Baboo Brojendra Nath Banerjee (*London Practitioner*, August, 1882) states that this is a very cheap, easily procurable, and efficient anti-periodic medicine. The value of alum is chiefly marked in cases of fever in which the attacks come on with clockwork regularity. It usually fails in irregular types of intermittent fever. Two doses are generally sufficient to complete the cure. Eight grains of burnt alum are to be given in each dose. The first dose is to be given three hours, and the next an hour before the expected attack of fever.

Alum may prove an efficient drug for killing the bacilli of malaria, but there seems to exist an inherent potency in Dr. Baboo's full name that will more effectually intimidate rampant malarial germs than any drug yet invented by medical sagacity all the world over.

The Therapeutic Action of Zinc.—Dr. Testa (*Dublin Journal Medical Science*, July, 1882) draws the following conclusions from experiments made with a twenty per cent. solution of sulphate of zinc injected hypodermically: 1. Zinc possesses a marked action on the heart; it diminishes the force of cardiac contraction and reduces blood-pressure. It then causes an increase in blood-pressure by direct action on the blood-vessels, causing their contraction. 2. Zinc acts on the intra-cardiac termination of the pneumogastric nerve; and, 3, causes arrest of the heart in diastole. 4. It diminishes peripheral sensibility up to complete anæsthesia, and causes motor paralysis. 5. Zinc reduces the excitability of the nervous system, and is indicated in convulsive neuropathies; it also reduces utero-ovarian hyperæmia, and is indicated in hysteria. 6. It is also indicated in nervous palpitations.

Tincture of Carduus Marianus in Hæmoptysis.—Dr. Lesenevitch has employed the tincture of carduus marianus (milk-thistle) in five cases of hæmoptysis. The dose is fifteen to twenty drops in a teaspoonful of water every two hours. In three of his cases, in which there was consolidation at the apices, the blood in the sputa was greatly diminished in quantity after six doses, and had entirely disappeared at the end of two days. Digitalis, the mineral acids, and ergot had previously been tried without success. In two other cases, in which cavities existed, no improvement followed the administration of the drug for three days, while ergot subsequently given arrested the hemorrhage in thirty-six hours.—*Journal de Médecine de Paris*, August 12, 1882.

Daily Variations in Stature.—Dr. Merkel states that the height of an individual after a night's rest, measured before rising from the bed, is two inches greater than it is in the evening, measured standing. There is a gradual diminution in height, caused by the yielding of the plantar arches and of the intervertebral discs; and a sudden diminution, when the individual rises, occurring at the articulations of the lower extremities. The sinking at the ankle is $\frac{1}{4}$ inch; at the knee, $\frac{1}{12}$ to $\frac{1}{4}$ inch; at the hip, $\frac{2}{3}$ inch. The shortening at the knee is probably due to the elasticity of the cartilages. At the hip there is, in addition, a sinking of the head of the femur into the cotyloid cavity.—*Journal de Médecine de Paris*, August 12, 1882.

Jaborandi in the Treatment of Pleurisy.—Dr. Dufour relates the case of a child, six years of age, suffering from double pleurisy, in which excellent results were obtained from the use of jaborandi. Several blisters had been applied without result, and at the end of two weeks the symptoms were so serious that it was feared that the effusion would become purulent. One drachm of jaborandi was ordered to be given in infusion. The half of this amount had hardly been taken when the child broke out into a profuse perspiration, but without ptyalism. Dr. Dufour believes that pilocarpine always causes salivation, while jaborandi produces sweating alone. On the day after the administration of the drug the effusion had disappeared, and respiration was normal. The patient went on to a good recovery.—*Journal de Médecine de Paris*, August 12, 1882.

PERINEAL CALCULI.—Dr. D. Molière (*Journal de Médecine de Paris*, August 12, 1882) relates the histories of three cases of perineal calculus. The first patient had had two attacks of gonorrhœa, followed by a stricture. Internal urethrotomy was performed, and the patient was discharged. Three years later he returned to the hospital, suffering from an abscess of the perineum. This was incised and found to contain urine and a quantity of gravel. The second case occurred in a man, thirty-five years of age, who had never had gonorrhœa. A perineal abscess formed and opened spontaneously, giving exit to a calculus the size of an egg, and weighing forty grammes. The only ascertainable cause for the formation of the calculus was a blow on the perineum with the butt-end of a musket twenty-five years before. In the third case there was a urinary abscess, the cause of which was stated to have been a fall upon the buttocks forty years previously. The fall was followed for a time by difficult micturition. The abscess was opened, and found to be filled with a quantity of degenerated pus. Two calculi were removed, one the size of an almond, the other smaller. There was no history of a previous gonorrhœa. The slow formation of perineal calculi is well known, cases having been recorded in which the period of development was fifty years, but those of traumatic origin are rare.

SPONTANEOUS RUPTURE OF THE RECTUM.—A recent number of the *Revue de Chirurgie* contains an interesting article on the above rare occurrence, by M. E. Quénu. The author applies the term "spontaneous" to cases of rupture, in consequence of simple muscular effort, of all the coats of an apparently healthy bowel. The first case of the kind was published by an English author, Sir B. Brodie. M. Quénu has collected six others, one of them having been observed by himself, in the clinique of Professor Richet. The records are not all equally complete. In four out of five in which information on the point is given, there was old and well-marked prolapse of the rectum. The rupture was always produced during an effort—four times during defæcation, once during vomiting, once while lifting a heavy weight, and once in consequence of the patient's straining while the surgeon was endeavoring to reduce a prolapse of the rectum. Excepting for rectal prolapse, the patients were well prior to the rupture. The rupture in each case took place suddenly, at the moment of effort. The patient felt acute pain in the belly, with general malaise, and perceived a voluminous mass protrude from the anus. Sometimes the protrusion was preceded by hemorrhage. The general condition quickly became worse, the face pale and Hippocratic, the voice feeble, the extremities cold; the intellect remained clear. Disappearance of the prolapse immediately followed the protrusion of intestine. The straining of the patient quickly caused the expulsion of more intestine, which formed a mass hanging between the thighs, and soon became congested and inflamed. When examination is made in such cases, the relaxed sphincter commonly offers no obstacle to digital exploration, and the pedicle of the protruded swelling can be followed up to the rent in the bowel, unless the latter should be too high up to be reached. The only treatment at all likely to be of service, of course, is the reduction of the mass. This is very difficult. In two cases laparotomy was performed and the bowel pulled up. In another the protruded intestine was opened and evacuated of fæces and flatus. After the protruded intestine has been reduced, the rent in the rectum should be sutured. If it be possible to reduce the intestine *per rectum*, the laceration may possibly be also sewn up in the same way; or the rectum, if previously prolapsed, may be pulled down and then stitches put in. We would remark, with reference to this proceeding, that in the present day laparotomy is not so dangerous a proceeding as it was in the days when some of the cases which M. Quénu quotes occurred; and hence that probably now, in the presence of so grave an accident, few surgeons would hesitate to open the abdomen, pull up the prolapsed bowel, and suture the wound. To elucidate the pathogeny of this accident, M. Quénu has made experiments to ascertain the resistance which the rectum offers to a bursting force. Having stitched up the anus, he pumped air into the rectum, measuring the pressure. He found that the rectum would bear, without giving way, a pressure equal to that of a column of mercury sixty centimetres high (about twenty-three inches). When the pressure passed that of seventy centimetres, the peritoneal coat began to crack, and the other coats followed. We may add that Schatz has shown that the ordinary pressure within the rectum is equal to that of a column of mercury from twenty-five to thirty centimetres high, and that it sometimes rises to that of fifty centimetres of mercury. He also tried by forcing injections into the veins to rupture the rectum; but the anastomosis was so free that this result did not happen, and, moreover, at a pressure of forty to fifty centimetres, the vein burst in the meso-rectum. The explanation which M. Quénu holds as probably correct, is that the rupture takes place in a bowel in which the veins are varicose, its walls congested by prolapse, and softened by infiltration of leucocytes and inflammatory effusion. He points out that in the three recorded cases of spontaneous rupture of the œsophagus, one occurred in an immoderate drinker, and the other two were preceded by vomiting of blood; from which he concludes that the condition of the œsophagus in them probably resembled that of the rectum in the cases under consideration.—*Med. Times and Gazette*, August 5, 1882.

NORWEGIAN METHODS OF DEALING WITH CONTAGIOUS DISEASES.—The sanitary organization of Norway was fixed by the law of May 16, 1860, which provides that each district, urban or rural, shall have a board of health, to consist of the district physician, an engineer, one of the magistrates, and three citizens. When a parent or householder has in his residence a case of contagious or malignant disease, he must report the fact at once to the president of the board of health. The attending physician is also required to report such cases.

When the board of health considers that the safety of the community is menaced by the presence of contagious disease, it has very great power of interference. It can divide the district into subdistricts, and place any of these under special supervision, can appoint physicians, establish temporary hospitals, and, if necessary, take any building for a hospital, the damages being fixed by a special jury. Each board prepares rules and regulations, which, when approved by the king, become law for that particular district. Taking Christiana, the capital, as a specimen, we find that these rules require physicians to make a daily report of the specially dangerous diseases, including small-pox, cholera, ty-

phoid fever, typhus, scarlet fever, measles, puerperal fever, erysipelas, diphtheria, and dysentery.

The city has the most ample hospital accommodation for each class of the sick. The hospitals for small-pox, cholera, typhus, scarlet fever, measles, being each separate and distinct, besides a hospital where persons suspected of having contracted a contagious disease can be kept under observation without exposing them to danger.

When a case of contagious disease is notified, the physician attending may advise his removal to hospital. In this case an order is at once issued, and the sick man is at once taken to hospital, his clothing, bedding, etc., are disinfected by dry heat, and the room is disinfected by burning sulphur.

In case of typhoid fever, the privy vault, if there is one, is emptied and disinfected. All this is done under the supervision of the city physician of the ward. If the attending physician does not desire the removal of the patient to hospital, he confers with the city physician or health officer, who has discretionary powers. In case of small-pox or typhus, it is rare to permit the patient to remain out of hospital.—*The Sanitary Engineer*, October 5, 1882.

Cotton Seed in Spasmodic Croup.—Dr. G. L. Gray, in *Miss. Val. Med. Monthly*, states that he has used this remedy successfully. Take a handful of seed, bruise them, boil in a quart of water for a few minutes, let it stand a short time, strain, sweeten, and when cool enough give the patient all he will drink, or, if necessary, pour it into the child. The relief is generally prompt, and sometimes without emesis. If persisted in, it produces free emesis. Dr. Gray also states that he has used the remedy with benefit in two cases of asthma.

Tuberculosis of the Heart in Children.—The following case is narrated in the *Louisville Medical News*, October 14, 1882: "A girl, eight and a half years of age, was admitted to the Children's Hospital, suffering from a remittent type of fever. The heart's action was tumultuous, with diffuse impulse; the heart-sounds were distinct, but somewhat dull. The area of precardial dulness was not increased; a rather obscure friction-sound was heard over the cardiac region; the pulse was quick and small. The duration of the disease was fourteen days. On post-mortem examination miliary tubercles were found in the lungs. The bronchial glands were enlarged and in a state of caseous degeneration. The heart was of normal size, and the pericardium contained about two tablespoonfuls of lemon-colored fluid. Miliary tubercles were scattered singly over the heart's surface. Upon opening the left ventricle it was found to contain a tumor five centimetres long and three centimetres broad. It was covered by endocardium, had an uneven surface, and emerged from the junction of the anterior wall with the interventricular septum, so that the greater portion of the tumor projected into the ventricular cavity. A miscropic investigation confirmed the opinion that it was of tubercular nature."

Professor Hirschsprung also reports a somewhat similar case of a girl, aged eight years, who was a healthy-looking child, but on admission to the hospital had serious symptoms pointing to the cardiac region, and represented by a tumultuous action of the heart, diffuse pulsation, increased cardiac dulness, slight cough, heightened temperature, and increased respiration. Dyspnœa and cyanosis set in, and the child died seven days after entering the hospital. A tubercle as large as a walnut was found in the internal wall of the left ventricle; a few miliary tubercles in the anterior part of the left upper lobe, and nowhere else in the lung; the bronchial glands, especially on the left side, were found in a state of cheesy degeneration, as were also the mesenteric glands; there were tubercles in the spleen and pericardium. The liver and spleen were enlarged, and the intestinal glands swollen, but not ulcerated.—*Jahrbuch für Kinderheilkunde*, vol. xviii., 1882.

Injections of Hot Water in Dysentery.—Dr. John G. Earish gives, in the *College and Clinical Record*, the history of three cases of dysentery, in all of which copious injections of hot water resulted in almost instantaneous amelioration of all the distressing symptoms, followed by a speedy cure.

Amyloid Tumors of the Conjunctiva.—In an elaborate article on the clinical significance of so-called amyloid tumors of the conjunctiva, Dr. Kubli, of Dorpat (*Knapp's Archives*, vol. xi., 1882), states that in the preliminary stages of the affection the conjunctiva is the only tissue attacked. Later on, however, other portions of the lids, or even other ocular tissues, may become involved. In twenty-seven cases (thirty-seven eyes), the whole conjunctiva was affected in thirteen, the conjunctiva fornicis in one, the scleral conjunctiva in four, the tarsal conjunctiva in one. The prevalent locality is the upper fold and neighboring portions of the tarsal conjunctiva. He divides the stages of development into four: 1, simple adenoid proliferation of the subconjunctival tissue; 2, hyaline degeneration; 3, exquisite amyloid degeneration; 4, calcification and ossification. If the neoplasm be poorly supplied with vessels, it is generally of a bright yellow color, glassy and elastic; if highly vascular, it varies from reddish yellow to reddish brown. During the first phase of development the most common symptoms are heaviness of the lids and increased sensibility of the eye to various influences. In the second the surface of the tumor becomes smooth and glistening. The greater the vascularity of the tumor, the less its consistency. Tumors in this phase are harder than those in the first, and more elastic than those in the third. In the third the consistency varies from hard to gelatinous, depending on the degree of vascularization. The tissues sometimes pit on pressure. In the fourth phase the amyloid degeneration is complicated with the presence of chalk or true bone, sometimes deeply situated in the tumor, and discoverable only by the microscope. The disturbances caused by amyloid tumors are chiefly mechanical, and include deformity, impaired mobility always of the lids, and often of the globe, ptosis, and secondary affections of the cornea, pannus, and consecutive impairment of vision. The disease has nothing in common with trachoma, but originates in a hitherto healthy conjunctiva. The simultaneous existence of trachoma and amyloid degeneration must be looked on as accidental. Relapses sometimes occur after extirpation, and the author thinks that they are frequent in proportion to the degree in which true amyloid degeneration has taken place. The treatment, when possible, should be radical extirpation at once, but, if not, then partial extirpation at intervals, in order to prevent symblepharon. The chief point in the after-treatment is to cleanse the conjunctival sac frequently and thoroughly with a two per cent. solution of boracic acid, which does not irritate.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, December 2, 1882.

THE EARLY RECOGNITION OF DISEASE OF THE KIDNEY.

THE importance of an early recognition of kidney disease and an accurate knowledge of the agents or influences which tend toward its development can be appreciated only when we consider how comparatively easy it is, in many instances, to interrupt early the course of this disorder, and, in other cases, how much may be done to avert a fatal issue, even after the disease has passed through its initial lesions and has become *chronic*. Until quite recently it has been generally taught and believed that the only trustworthy manifestations of the chronic forms of Bright's disease were such as œdema of the face and lower extremities, pallor of the skin and mucous membranes, pain in the back and loins, gastric disturbances, and increased or diminished flow of urine containing albumen and casts. More recent investigations, however, show that there are other symptoms, more or less constant, which point toward the existence of this obscure lesion.

Dr. Arthur V. Meigs, of Philadelphia, shows in a report of sixty-two cases of albuminuria that *dyspnœa* associated with great nervousness and loss of self-control, with no other sufficient cause for its existence, should excite the suspicion that there exists a lesion of the kidney. These attacks of dyspnœa frequently come on with great suddenness in persons who have not considered themselves sick, and such attacks are often quite rapidly fatal. This condition has been described as *renal asthma*, but he believes it to be much more common than is usually supposed. Another symptom considered valuable is *coryza*, of a character more severe than the ordinary cold in the head. With it there is not much nasal discharge, but the patient finds it difficult to breathe, except through the mouth. Associated with this condition there is excessive oppression—more than can be accounted for by the local disturbance. The presence of tube-casts is regarded as a proof of the existence of Bright's disease, but not a distinctive mark of any one of its varieties, for any form of tube-cast may occur in any division of the disease, and at almost any stage, or all the varieties may occur simultaneously in one case. The appearance of oil-casts and cells need not always excite great alarm, for they have been found for many weeks in the urine of patients who have recovered. Tube-casts may occur in the urine *without* or in *advance* of the presence of albumen, or, on the contrary, there may be albumen constantly, without tube-casts. It is also stated that the presence of albumen and tube-casts, even though found for so long a time as *two* years, is not a sufficient reason for giving a *fatal prognosis*. As to etiology, the existence of oxaluria or of uric acid lithiasis is a prolific source of mischief to the kidney. The presence of this gravel usually precedes the appearance of albumen and casts.

Dr. T. A. McBride, in his recent monograph on "The Early Diagnosis of Chronic Bright's Disease," in touching on the points already referred to, coincides with Dr. Meigs. He further states that increased arterial tension is a valuable sign, being present in the *acute* and chronic forms. The qualities of the pulse in high tension are described as *long*, *persistent*, *hard*, or *incompressible*. The tension is appreciated by gliding the finger along the artery forward and backward, and from side to side. In the first or highest degree the artery feels like a cord or tendon; in the second degree, like a rubber tube distended with fluid; in the third degree, like a fine rubber tube. Hypertrophy of the heart, especially of the left ventricle, is very constantly found, the following statistics showing its frequency: Bamberger discovered hypertrophy of the heart in 344 out of 807 cases of chronic Bright's disease; Traube, hypertrophy of *left ventricle* in 93 cases out of 100. Grainger Stewart records 31 cases out of 68 of chronic Bright's disease.

The analysis of two hundred and fifty cases of granular kidney, drawn from St. George's Hospital books, gives forty-eight per cent. as the proportion of cardiac enlargement. *Chronic endarteritis*, especially of the *temporal* and *radial* arteries, when it can be determined not to be the direct result of the usual causes, is a forerunner of chronic renal inflammation. The *initial* stage of chronic interstitial nephritis, contracted kidney, manifests itself in the following symptoms: persistently high specific gravity of the urine, the very frequent presence of *large* crystals of uric acid, and more occasionally of crystals of oxalate of lime; persistent presence of high arterial tension, the early detection of beginning hypertrophy of left ventricle, the occurrence of murmurs,

denoting valvular insufficiency, and the early detection of chronic endarteritis. The causative relationship between *impaired functional activity* of the *digestive organs* and the chronic inflammatory lesions of the kidney, is shown in the following manner: the nitrogenous material, imperfectly oxidized, is taken up by the blood, carried to the kidneys, exerting upon them a directly stimulating effect, maintaining in them a constant state of functional hyperæmia, and by increasing the general capillary resistance, raising the systemic blood-pressure, so as to keep up a permanent strain on the organs of circulation. This condition is *at once* marked by dyspepsia, constipation, lassitude, headache, muscular pains, coldness of extremities, tendency to pharyngeal or tracheal catarrh, resulting finally in cardiac dilatation, and hypertrophy, chronic bronchitis, dyspnœa, chronic gastric catarrh, arterio-capillary fibrosis, and *interstitial nephritis*. It is very important to note the *quantity* of urine passed in twenty-four hours. In chronic parenchymatous nephritis the amount is usually *below* the normal, it may be as low as ten or twelve ounces in twenty-four hours; or a small amount may be passed for a *few days*, then a normal quantity voided for a while. In chronic diffuse nephritis the amount may be small at first, then normal for a few days; the longer the patient lives the larger the flow. In chronic interstitial nephritis Grainger Stewart thinks that in the early stages of the small kidney the urine is not increased in quantity, while Dickinson and Saundby believe that an increased quantity of urine appears early. The intercurrent affections, most commonly found, are *emphysema*, bronchitis, pneumonia, and cerebral hemorrhage. With this new light thrown on the symptomatology of the disease in question, we are enabled to interpret correctly certain indications which before had no special significance.

THE HEALTH OF AMERICAN WOMEN.

THE "Health of American Women" is the title of a symposium which appears in the current number of the *North American Review*. This magazine shows itself courageous as well as enterprising in thus bringing a topic before the public which necessarily involves discussions and allusions that have generally been thought too delicate for the ordinary reader. The *Review* has done a good and timely act in thus presenting a subject so strikingly to the public.

The writers in the symposium are Dr. Dio Lewis, Elizabeth Cady Stanton, and Dr. James Read Chadwick. Dr. Lewis, assuming the fact of a very large amount of ill-health among American women, directs his remarks chiefly to the cause and cure. Chief among the causes he puts the corset, while for the cure of female ills he recommends removal of that delusive appendage and systematic physical education. Dr. Lewis writes from the standpoint of a partisan. Much that he says is true, yet it is not true that corsets and heavy skirts necessarily cause disease. They form only one of numerous other factors. We must have other than sidewalk observations also to prove that they uniformly reduce the size of the waist from three to fifteen inches. As for physical exercise, its usefulness and necessity are of course admitted. Dr. Lewis has done good service in forcing this point upon the attention of educators.

Mrs. Stanton touches upon nearly every phase of the woman question in her brief article. Co-education, wider scope for woman's energies, and in general her liberty and elevation to equality with man would, according to this writer, remove many of the physical evils that attach to women.

Dr. Chadwick's article contains much more to attract the attention of the thoughtful and especially of medical men. The most prevalent and potent causes of ill-health in American women, he says, relate to education, climate, and food and drink.

Dr. Chadwick refers at once to the radical views propounded by Dr. Edward H. Clark about ten years ago on the subject of the education of girls. To these views our writer is strongly opposed. He believes that the function of menstruation is essentially one of elimination. The system throws off every month materials accumulated in excess for an emergency that does not occur. It should, therefore, not necessarily involve a special demand upon the vital powers any more than does the exercise of other emunctories. It is admitted that severe disturbances do very frequently occur at the present day in American women. But these are because she has been the victim of a defective training and education, by which there has been developed "an abnormal acuteness of the sensory faculties." The remedy, therefore, is to subject the female sex, from earliest childhood to full womanhood, to a systematic course of physical and mental exercise. "Let us," says Dr. Chadwick, "store their minds with useful information; let us disclose to them the entrancing interest of nature and nature's laws; and finally let us open as an end and motive for their efforts, the same fields of labor, with the prospects of reward, as are now open for men."

Dr. Chadwick is undoubtedly right in his view that in a normally developed woman menstruation should not make any great or special demands upon the vital powers. Perhaps he puts the matter somewhat too strongly, for physiology, human and comparative, teaches us that at the menstrual period there is necessarily some nervous perturbation over and above the simple process of eliminating superfluous blood and epithelium.

It must also be shown that some of the existing menstrual demands upon the vital powers of women

are not necessary accompaniments of a high state of civilization.

As for the educational remedies offered, we believe that the medical profession will endorse the physical but not the intellectual part of Dr. Chadwick's programme. A strong, vigorous woman may be sensitive and emotional without having dysmenorrhœa. It is a serious question whether she would not be less likely to have menstrual troubles than if she were studious and intellectual.

We greatly doubt if the pointedly intellectual education of women will ever help the sex as a whole. Woman's intellectual contributions to the world's progress have so far been trivial. It is impossible that they should ever be great so long as a large share of her energies must be absorbed in the function of maturity. Woman's power and usefulness rest upon other things than her erudition. It would be unwise and impracticable to enforce upon the whole sex systematically and persistently "useful information" and exclusively "mental exercises." While these things may be made more of than is done at present, we should say that it is physical education and prudence which will do more for American women than any store of facts or study of natural law.

Perhaps, after all, we do not differ so greatly from Dr. Chadwick. All admit that ignorance is dangerous and knowledge is useful to women. It is only a question of how much and how pertinaciously facts, hard and otherwise, should be driven into them. We advocate, as a healthful education, that kind which brings out all that is latent or potential. An education which embraces the sciences rather than the arts would be more likely to strain than develop the female mind.

Regarding the influences of our climate nothing new is told us. The effects of its stimulating dryness as well as of the piercing winter cold which compels in-door life are well known.

The food and drink of American women is justly criticised. The former is abundant but of a bad quality and badly cooked. In tea, women have an enemy which, according to Dr. Chadwick, is comparable to tobacco with men.

Some interesting facts are given regarding the fertility of American women. He publishes statistics which indicate, though they are insufficient completely to show, that the period of fertility is greater in American women than in the English or Irish, being respectively 31.85, 31.35, and 29.16 years. It is inferred that the small present fertility of American women is due not to physical but to social causes.

Dr. Chadwick closes with the statement which will be generally accepted that American women are not less healthy than those of most other civilized races. Nor does he think that any of the causes of impaired health in American women are inherent in our climate, institutions or social customs.

THE ASYLUM REFORM MOVEMENT AND THE NATIONAL ASSOCIATION.

We have received a circular from the Secretary of the National Association for the Protection of the Insane and the Prevention of Insanity, announcing some new departures in the plan of the Society's work.

Many things, we are told and believe, have combined to encourage this organization and stimulate it to greater activity. The stupid self-contentment which characterized so large a part of the asylum superintendents has been at last much disturbed. Those who have most pretended to ignore the teachings of reformed psychiatry have, in a half-clandestine manner, begun to follow its suggestions.

A considerable number of superintendents are becoming rather more interested in insanity than gardening—which could not be said ten years ago. There is in fact a break in their once solid and stolid ranks. The use of mechanical restraint has vastly diminished; employment and freedom have taken its place. Many superintendents are in full harmony with the reform movement represented by the Association.

But for all this, sufficiently serious work remains to be done. We are confronted with the fact that the United States contains 100,000 lunatics who need care and watching, and that 10,000 new victims of mental disease knock at our asylum doors every year, asking for admission and right treatment. Yet we cannot point to more than half a dozen States where the asylums are conducted independently of political rings, or where they are managed as though they were medical institutions with patients whose diseases deserved scientific study. As yet, in the public opinion, insanity is more than a misfortune, and more than a disease. Asylums are looked at as prisons, and their superintendents as keepers, never quite above corruption. This sad lack of confidence in our asylum system is shown almost every week. The opinion of a county judge or a third-rate lawyer is accepted before that of the most venerable expert. The public trusts all things before it does an insane asylum.

Certainly, therefore, matters want mending. The people need instruction, our system of care for the insane needs to be such that we can ask people to have confidence in it. Besides, there is the question, how shall we lessen and prevent insanity?

The National Association proposes to work for all these objects. It has obtained active correspondents in nearly all the States, who will report upon local deficiencies, local wants, and progress. A national journal or bulletin is to be issued regularly, and is to contain reports of progress in scientific and economic reform. We observe the names of Dr. Bancroft, Dr. Walter Channing, Dr. C. K. Mills, Dr. Peter Bryce, Dr. Bannister, and others, who are to

be connected with the future work of the Association.

A meeting will be held in Philadelphia, January 25th, when further active and aggressive work will be inaugurated.

THE IMMIGRANT INSPECTION SERVICE AGAIN.

On June 1, 1882, the immigrant inspection service went into operation in the West, under the direction of the National Board of Health.

We have already referred to the reports of the Supervising Inspector, from which one concludes that nearly twenty per cent. of Western immigrants are imperfectly protected against small-pox.

The monthly reports give more fully analyzed data. Of 16,473 immigrants who were examined in October, 4,728, or nearly 30 per cent. were susceptible when they landed. Nearly 1,400 of these, however, were vaccinated by Eastern inspectors, the work being finished by Dr. Ranch's inspectors.

Under the present system it is quite plain that very few unprotected immigrants escape vaccination by the time they reach the West. It is equally clear, however, and we wish to reiterate the fact, that this system is cumbersome, expensive, and unnecessary.

It is now the custom for the ship-surgeons to examine and vaccinate the immigrants. The port health officer and Eastern inspectors examine them again and vaccinate as many as they consider necessary; finally the Western inspectors re-examine and complete the work.

Much of the time and labor thus expended might be saved if the ship-surgeon did his work properly. The tables show that in some steamers the number of imperfectly protected immigrants reaches from thirty to fifty per cent., while in other cases it sinks as low as five per cent. We are told also that some steamship companies buy cheap virus in large quantities, and keep it till it is all used up. It is but fair that these companies should be compelled to land none but protected immigrants at our ports. The vaccinations can readily be done on shipboard during the voyage, thus avoiding all the delay and expense now incurred.

PATHOLOGICAL EXPERIMENTATION AND THE ERYSIPELAS-COCCUS.

If the present enthusiasm over experimental human pathology in Germany continues, there may be needed a society for its prevention. We recently made note of the case of a German surgeon who resected part of a human lung. Although the operation was measurably successful, the patient very soon died, and the doctor was remanded to a jury. A case is now reported of a somewhat similar result, obtained in experimenting with the bacteria of erysipelas.

The view that erysipelas has a specific micrococcus has been upheld by several pathologists. The test of cultivation and inoculation, however, was first made, so far as we know, by Dr. Fehleisen. His experiments were reported not long ago at a meeting of the Würzburg Society of Physiological Medicine. Dr. Fehleisen stated that in a great number of cases of erysipelas which he had examined he always found in the diseased skin peculiar micrococci. He tried to cultivate these in the fluid from the blebs, but without success. He then used Klebs' culture-fluid, composed of flesh-infusion and gelatine pepton. In this fluid he placed small bits of erysipelatous skin containing the micrococci. These "erysipelas-cocci" grew there, and could be transferred to other previously barren fluids, where they speedily developed again.

To prove that these transferred organisms were specific, there only lacked a suitable opportunity to inoculate them. This opportunity was finally offered in the person of a woman suffering from multiple fibro-sarcomata. The inoculation was made, and with such success that the patient died. It is considered proved, therefore, that erysipelas is due to the presence and malign activity of a special bacterium. It may be that the patient who thus died to reveal a scientific truth was moribund, and would have died anyway. She may also have been quite conscious of the danger to which she risked herself voluntarily. But there are some doubts of all this, and we would at any rate suggest to pathologists to bear in mind that human life is worth rather more than a micrococcus or a surgical theory.

Dr. Fehleisen is continuing his investigations, but now employs rabbits.

An Old Physician Gone.—Probably few remember when Dr. Edward N. Bibby, who recently died at the age of ninety, practised medicine in this city. He began his professional career with Dr. Bruce in 1815. After about twenty-five years of successful work he retired, and has been known since then chiefly in social circles. He retained his faculties to the last, prescribing for himself five minutes before his death.

Death of Dr. Christopher C. Cox.—Dr. Christopher C. Cox died in Washington, November 25th. He was born in Baltimore, Md., in 1816, graduated at Yale College in 1835 and was made Doctor of Laws by Trinity College in 1867. Dr. Cox practised medicine in Washington for many years, holding at the same time a number of responsible positions. He was appointed Commissioner of Pensions in 1868, and a member of the District of Columbia Board of Health in 1871. He was for one year a Professor in one of the Philadelphia colleges. He also served as a surgeon in the army during the rebellion, and as Surgeon-General of Maryland. Before the close of the war he was elected Lieutenant-Governor of Maryland. He was also a Commissioner to the Australian Exposition. He was a man of fine literary attainments, some of his published poems having obtained a wide circulation. His professional skill was widely acknowledged, and he was among the leading practitioners of his city.

Reviews and Notices of Books.

A Guide to Therapeutics and Materia Medica. By Robert Farquharson, M.D., Edinburgh, F.R.C.P., London. Third American Edition. Enlarged and adapted to the U. S. Pharmacopœia, by Frank Woodbury, M.D. Philadelphia: Henry C. Lea's Son & Co. 1882.

The author, in this volume, institutes a comparative estimate of the absolute importance of medicines, giving, in this way, satisfactory laws for our guidance in the administration of such remedies as are best calculated to hasten recovery from morbid conditions. Some very practical remarks are made on *the proper time* for the administration of drugs, individual peculiarities, and chemical and physiological incompatibilities. The art of prescribing for children, a subject usually only incidentally touched upon, is represented in such a manner as to correct some erroneous views entertained by many therapeutists. It is stated that the organs of elimination in children are in unusual activity, therefore disposed to excrete medicinal substances with special promptitude. For this reason doses equally large with those for adults may be given, not only with impunity, but with decided advantage.

Questions on Human Anatomy. By Samuel O. L. Potter, M.A., M.D. Sixty-three Illustrations. Philadelphia: P. Blakiston, Son & Co. 1882.

This little volume is practically a digest of the larger works on human anatomy, presenting to the student a concise arrangement of questions and answers which would greatly facilitate the study of anatomy prior to graduation.

Acute Dilatation of the Heart.—Dr. Heitler, Docent in Vienna, who first called the attention of the profession particularly to acute dilatation of the heart, in a paper lately published, is preparing a much more elaborate one, in which he will go more especially into the literature of the subject. Frequently before his hearers he will demonstrate a case of acute dilatation which in a few minutes has almost entirely disappeared. According to the length of duration of the dilatation is the prognosis favorable or not. He has never seen a case follow simple fatigue or excessive exercise; it is most frequently during the fevers, such as typhoid. It happens in pneumonia, Bright's disease, chlorosis, anæmia, and also when there is chronic dilatation with valvular insufficiency and hypertrophy. The sudden dilatation may occur many times in the same individual, and sometimes it lasts for several hours with the gravest symptoms. Digitalis, which Dr. Heitler calls a heart-tonic, and rest with quick and sharp percussion over the heart he recommends in the treatment. It is to be hoped this suggestion of Dr. H.'s will be thoroughly worked up, since many symptoms may thus be explained which have puzzled even the best auscultators.—*Cor. of Maryland Medical Journal.*

The Inhabitants of Kentucky and Tennessee, says the *Louisville Medical News*, are the tallest people in the world. The men weigh from 154 to 158 pounds on the average, and the women, though weighing somewhat less, are, our contemporary proudly adds, of extraordinary beauty.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 8, 1882.

R. E. Van Gieson, M.D., President *pro tem.*

Dr. W. M. Carpenter presented, in behalf of a candidate, a specimen of

DERMOID CYST OF THE OVARY.

Dr. Willard Parker, Jr., presented, in behalf of a candidate, a specimen of

FIBRO-SARCOMA OF THE BREAST.

Dr. J. H. Ripley presented portions of membrane removed from the trachea, accompanied by the following history:

PRIMARY CROUP—TRACHEOTOMY—DIPHTHERITIC CROUP.

"Richard Mc——, six years of age, had had a cough for two weeks, which was only troublesome at night, otherwise he was in fair health. No dyspnœa had been observed by his grandmother, who had him in care, until the morning of October 16th. In the evening of that same day Dr. Leipziger was called to see him, and found the dyspnœa very distressing. He sent for his neighbor, Dr. Cushman, and both decided that the patient's only chance was in having tracheotomy done. I was asked to do the operation, and saw the child at once. The dyspnœa was then extreme, the face and extremities cold and clammy, and the intellect clouded. The pulse was full and slow, the respiration frequent, the temperature subnormal. There was no swelling of the neck or tonsils, no nasal discharge, and no membrane to be seen either in the nose or throat. Chloroform was sparingly given, and the trachea opened without delay, Drs. Leipziger and Cushman assisting. Much purulent matter escaped from the wound, but no distinct shreds of membrane. Soon after the operation the temperature became normal, the respiration easy, and the evidences of imperfect oxygenation disappeared.

October 17th, 10 A.M.—Breathing easy, and child looking well. Still no membrane to be seen and no swelling of neck or glands. 6 P.M.: Has coughed up several pieces of membrane and a piece is now heard flapping in the trachea. There is a profuse discharge of muco-purulent matter from the right nostril, and the left tonsil is red and swollen, and partly covered with a milk-white membrane.

October 18th, 10 A.M.—Neck is much swollen, face congested and perspiring, respiration somewhat embarrassed, nose still discharging, wound covered with membrane; several pieces of membrane are removed from the trachea, but breathing is not relieved. 6 P.M.: Boy has passed only four ounces of urine to-day, and it is albuminous, and contains both red and white blood-corpuscles.

October 19th.—Morphine enabled the patient to pass a comparatively comfortable night. His general condition this morning is very unfavorable. The neck is enormously swollen, two large serous blebs have formed near the edges of the wound, and both tonsils are covered with membrane; respiration and pulse have increased in frequency, and the temperature has fallen from 103° to 101° F. The urine remains scanty, and the proportion of albumen has increased. The child is rapidly failing. 6 P.M.: Died at 5 P.M. of asthenia.

Steam lime-water spray, pilocarpin, and other remedies were faithfully tried by Dr. Leipziger, who had charge of the case."

The points of special interest in the case were the following: The child at first presented all the rational symptoms of so-called membranous croup, but there was no glandular swelling, nor could membrane be seen, and yet the child was evidently dying of laryngeal stenosis. After the operation all the symptoms of constitutional poisoning developed, and were so marked there could be no doubt that it was a case of diphtheritic croup. He believed that contagion would not have necessarily followed exposure to the case when he first saw the child. Granting that there was such a thing as pseudo-membranous croup, he believed that the early symptoms, in such cases, gave no clue as to what was to follow, and no man could predict what would be the condition of the case on the next day. Hence it was necessary to remove at once all children from exposure without reference to the apparent mildness of the attack.

Dr. Van Gieson confirmed the remarks made by Dr. Ripley, by referring to cases which recently came under his observation. The attending physician, an eminent practitioner, had told the parents that there was no danger, and that the other children need not be removed. Two children died, and the third barely escaped. He believed it was eminently safe to remove the other children in a family, no matter how mild might be the attack of the first child, and also without reference to what our belief might be.

PECULIAR EXOSTOSIS OF THE FEMUR.

Dr. J. A. Wyeth presented the left femur which had been fractured. It exhibited an exostosis at its upper portion, an inch and a half long, about one-fourth of an inch in diameter, and projecting *downward*.

RECOVERY FROM A GUN-SHOT WOUND OF THE KNEE.

Dr. Wyeth also presented a specimen removed from the body of a man who received a gun-shot wound of the knee-joint, and recovered with motion. There was a wound of entrance and exit, and the missile, either a Minié or a Belgian ball, passed beneath the patella and clipped off a piece of bone from the surface of each condyle. The surface of the internal condyle had been entirely obliterated. Recovery had been so complete that what remained of the track of the bullet was non-articular. There was no anchylosis.

Dr. G. L. Peabody presented a specimen of

HEMORRHAGE INTO THE PONS VAROLII.

A. C——, aged fifty-seven, of Ireland, widow, servant, was admitted to the New York Hospital April 14, 1882. She was brought into the hospital in a moribund condition, artificial respiration having been necessary in the ambulance. An incomplete previous history was obtained from her friends. She had had a number of severe pulmonary hemorrhages within four years past. This morning she started to go to her work, complaining of headache and dizziness, and very suddenly she became unconscious. A physician was summoned, who found her suffering from œdema of the lungs, and gave her brandy hypodermically.

On admission she was emaciated and anæmic. There was no œdema. The muscular tissue was very flabby, and she presented an appearance of senility. Her skin was warm and dry; her pupils dilated and immobile. She was completely comatose; reflexes were all absent, and she did not respire. Both heart-sounds were audible, and the radial pulse could still be felt. A faradic current was applied to the phrenic nerves, and brandy, ether, and digitalin were administered hypodermically. Presently she gasped twice, and the respiration again ceased. Artificial respiration was resorted to and continued for nearly half an hour, but without avail. The radial pulse soon disappeared, and the heart ceased to beat.

At the autopsy it was noticed that the convolutions of the brain were generally somewhat flattened. The third ventricle contained a small clot of blood, and the fourth ventricle was completely distended by blood. The tissue of the pons was almost entirely disintegrated by hemorrhage.

The heart contained an enormous amount of fat, in many regions the transverse striæ having been rendered quite invisible. The left ventricle was somewhat hypertrophied.

The kidneys showed the common lesions of advanced diffuse nephritis.

Dr. Peabody also presented specimens illustrating

PIGMENT IN THE BLOOD-VESSELS OF THE BRAIN, SPINAL CORD, LIVER, AND SPLEEN.

E. H——, forty-nine years of age, United States, widower, mariner, was admitted to the New York Hospital on November 6, 1882. He was quite conscious, though greatly depressed. He was suffering from a chill, his temperature being 100° F.; pulse was 120, full and bounding; breathing was good. He soon began to suffer from general convulsion; later the convulsions were confined to the upper extremities. His temperature became quite irregular soon after admission, rising to 102° F., and then again falling to normal.

It was impossible to obtain urine, at first, for examination, because his penis exhibited the condition of hypospadias, and the meatus was too small to admit a catheter. He passed it involuntarily, in apparent abundance. About a drachm was finally obtained for examination, and found to contain albumen and granular casts. He was given croton oil, and put into a hot-air bath. The oil did not operate, but he was soon in a profuse sweat. Subsequently the administration of more croton oil was followed by free purging. Soon after this he roused himself sufficiently to talk about his condition. In the evening convulsions suddenly returned with increased intensity, respirations were accelerated and noisy; pulse became 130 to 140, and his temperature (which had been normal at 6.40 P.M.) began to rise rapidly.

At 1.30 A.M. on the following morning his temperature was 104° F., and he was completely unconscious. The hot-air bath was again resorted to with the effect of producing morbid sweating, but without causing the temperature to fall. At 2 A.M. it was 105.4° F., his pulse became weaker, œdema of the lungs developed, and soon thereafter, despite cupping and stimulation, he died.

The autopsy was held on the afternoon of the same day. The chief lesions of interest were in the gray matter of the brain, in the spleen, and in the liver. The gray matter of the brain was much darker gray than usual, while the liver and spleen were of a very dark brown hue. The changes in color were due to the presence of a large amount of granular pigment within the blood-vessels of these organs. He had found that in the brain the pigment

was not confined to the vessels of the gray matter, but also existed in those of the white matter. In the liver it was chiefly in the vessels, not altogether, and was also in the connective tissues. He had also found it in the white blood-cells.

Dr. Peabody exhibited hardened sections of brain and kidney taken by him some years ago from a similar case. They exhibited the vessels, even the small ones, of the brain almost as distinctly marked out as if they had been injected; in the kidney the vessels of the Malpighian tufts, being the first of the two sets of capillaries through which the blood has to pass, contained large quantities of pigment.

The case was instructive regarding the diagnosis of similar ones, and suggested the propriety of examining the blood in all such conditions. He believed that if the examinations were carefully conducted, pigment would always be found *during* a paroxysm of the disease.

As to the etiology of the disease, he could only say, in view of the defective history, that the man had been a sailor, and suggested that he had probably been in the tropics, where malignant forms of ague were not infrequently contracted.

PIGMENTATION OF PIA MATER OF THE CORD.

Dr. Peabody further presented a specimen that illustrated the above condition. He had seen this condition several times, both about the cord and at the base of the brain, and in none of the cases was he able to trace any symptoms to it. The pigment in cases of this kind was not free in the lumen of the vessels, but was deposited in the fixed cells of the membranes, and was permanent, having quite a different etiology and significance from that in the organ first exhibited.

Dr B. Robinson asked Dr. Peabody if he wished to affirm that that pigment could be found invariably in the blood in malarial fevers.

Dr. Peabody replied that he did not wish to be understood as making that assertion, but he thought it could be found in all cases of pernicious fever if the blood was examined during the paroxysm, and taken from parts of the body where the circulation is not very active. If the blood was examined in the common way by removing a portion from the end of a finger, probably pigment would not be found uniformly; but, if the blood was taken from the back, pigment would probably be found in all cases in abundance. He did not, however, believe that pigment would be uniformly found in the blood in ordinary attacks of intermittent fever.

Dr. Robinson remarked that in a number of cases of intermittent fever he had examined the blood soon after the occurrence of the paroxysm, and had failed to detect pigment.

ANEURISM OF THE AORTA.

Dr. B. Robinson presented a specimen with the following history: It was removed from the body of a man, aged thirty-two, single, a native of the United States, and by occupation a saddler, who entered St. Luke's Hospital one week ago. He had always been healthy until two months ago, when he took a severe cold which was attended by a severe cough and the usual symptoms of acute bronchitis. The difficulty of breathing seemed to be no greater than could be accounted for by the bronchitis, but a few days afterward it increased and persisted until he entered the hospital. At times the dyspnœa was accompanied by severe paroxysmal attacks of coughing. On admission there was considerable dyspnœa, both inspiration and expiration being prolonged and noisy. Examination of the chest revealed no cardiac symptoms. There were no râles, but there was hyper-resonance on percussion and the physical signs of vesicular emphysema. The difficulty of breathing continued. Laryngeal examination did not reveal anything abnormal.

There was not much hoarseness; certainly no aphonia. There was no history of specific disease or strain. The stridor was marked in both inspiration and expiration; but there was no cyanosis nor œdema of the extremities. The diagnosis was acute vesicular emphysema, generalized, possibly developed by the acute bronchitis in an individual who had not presented any other signs of disease. The man became comatose and died.

At the autopsy there were found general emphysema of the lungs, and in the lower portion of the lower lobe of the left lung a possible condition of consolidation. The right ventricle contained a fibrinous clot. The larynx was normal. An aneurism of the arch of the aorta, about the size of a pullet's egg, was found, most prominent upon the left side and extending in front of the trachea, and it had evidently produced a certain amount of stenosis.

As bearing upon the theory that the fine chest râles are produced in pleural plastic exudation, it was remarkable that such râles were heard distinctly upon both sides under the clavicles, but upon one side only did there exist any plastic exudation.

Dr. Ripley remarked, concerning the general emphysematous condition of the lungs, that, some time ago, he presented a specimen of aneurism of the arch of the aorta, which pressed upon the trachea and one bronchus, and directed attention to the fact that the lung which did not receive the usual quantity of air was in a state of emphysema. He had also proved that those children who died with bronchial and laryngeal obstruction did not have pneumonia but emphysema. Dr. Robinson's case sustained his theory. Every case in which he had made an autopsy after death from croup had showed the lungs to be in the same condition, and to this he had also directed attention in connection with that subject.

Dr. J. Lewis Smith thought that in nearly all cases of recent catarrhal pneumonia in children the lungs could be inflated, and the same was true with reference to atelectasis; but that the two conditions could be differentiated by the semi-solid feel of the lungs in pneumonia.

Dr. Ripley believed it was impossible to inflate those lobules which were the seat of catarrhal pneumonia, unless they were only partially filled with inflammatory products.

TUMOR (LIPOMA) OF THE AXILLA IN AN INFANT FOUR MONTHS OLD.

Dr. Briddon presented a specimen with the following history: The patient from whom it was removed was brought to his office by its parents in company with their attending physician, Dr. Stephen I. Clark, on November 3, 1882. The parents were healthy-looking people, and were not aware of any such disease as that which afflicted the child having occurred in any member of the family on either side. The mother first noticed a swelling two months ago, about the size of her thumb; it was situated one inch to the outside of, and a little above the level of the left nipple; it had steadily increased in size, and twenty-four hours before Dr. Briddon's

examination it was explored by Dr. Clark with a hypodermic syringe, with negative results.

The child was four months old, large for its age, laughing, lively, bright and healthy in appearance; certainly bearing no evidence of systemic contamination. The left axilla was filled with a tumor fully as large as the closed fist of an adult. It bulged in front and below, passing upward into the apex of the space. It was ovoid in form, and its long axis was directed obliquely from the neighborhood of the anterior border of the scapula to the middle of the clavicle. The skin was free and did not dimple on lateral pressure of the tumor. It was slightly mottled, reddish, with a few superficial veins meandering over the surface. It yielded the deceptive sense of fluctuation, that was common to some malignant growths, and such was his opinion of its nature, but to satisfy Dr. Clark he explored it with an aspirating needle, with no different results than those obtained by the doctor himself.

Dr. Briddon recommended an operation, and gave a guarded prognosis as to the probable recurrence of the disease. In view of the dangers of such an operation in so young a child advised that it should be performed in the hospital; and at a consultation held there on November 7th, the doubtful character of the tumor was recognized by the attending staff.

Operation (Presbyterian Hospital, November 7th).—The tumor had visibly increased in size since last seen. The measurements taken by the house surgeon, Dr. H. B. McCarroll, were as follows: long diameter, six and one-half inches; vertical, five and a half.

An incision was made in the direction of the long axis of the tumor, dividing the skin and subcutaneous fat. The deep fascia was then divided on a director, when it was found that the anterior border of the growth was covered by the lower border of the pectoralis major muscle. This was divided obliquely upward suffiently to permit free access of the fingers, which were then principally used in freeing the growth from surrounding structures. A large lobe grew backward under cover of the anterior border of the latissimus, which was divided to afford more space; and there was then no further difficulty in enucleating the whole. The axilla was entirely emptied of everything, exposing the muscular boundaries and the vasculo-neural sheath that passes through it. The hemorrhage was insignificant, some of such vessels as were encountered being tied before, and others promptly after division. A drainage-tube was introduced in the most dependent angle, and the edges were approximated by interrupted sutures, and covered with a pad of antiseptic cotton.

The structure of the tumor, to the naked eye, resembled that of the fresh section of a pancreas. It consisted of two lobes connected by an isthmus, and weighed five and a half ounces.

The child made an uninterrupted recovery, and was discharged from the hospital on the 14th.

Report of the Pathologist, Dr. Satterthwaite.—"The tumor removed from the axillary region by Dr. Briddon, November 7, 1882, proved on microscopic examination to be a lipoma. In gross appearance it was lobulated throughout, separated by a constriction into two unequal halves, bluish pink color, quite different from that of most fatty tumors."

In evidence of the great difficulty sometimes encountered in the diagnosis of tumors it may be stated that there was absolutely nothing in the clinical history, or in the physical condition of this tumor, that appeared to warrant even a suspicion of its true nature. In fact, the pretty general impression of its malignancy led to a rather strenuous opposition to its removal, and at the meeting of this Society not a single member ventured to express an opinion from naked eye examination. Only the microscope revealed its character.

Dr. Ferguson presented specimens illustrating varieties of

DIVERTICULUM OF THE SMALL INTESTINE.

There were six preparations, and they illustrated anomalies of fœtal development. Originally they were processes of the umbilical vesicle which communicated with the intestine; usually with the lower part of the jejunum or ileum. From the intestine they pass downward and forward a varying distance toward the umbilicus, which they sometimes joined. Their structure was the same as that of the intestine from which they proceeded.

They were of interest pathologically because they produced peritonitis and sometimes death in different ways. First, when the diverticulum was small, foreign bodies taken in with food might lodge in it and produce peritonitis and death. Secondly, the diverticulum might become adherent, by local inflammation, to the intestines or to the parietal peritoneum, etc., thus forming conditions favorable for the strangulation of part of the intestine. Thirdly, a diverticulum might have a partially developed mesentery, forming an opening through which a loop of the intestine could pass and become strangulated.

Dr. Ferguson also presented a specimen of

ANEURISM OF THE ABDOMINAL AORTA, INVOLVING THE SUPERIOR MESENTERIC ARTERY.

It was removed from the body of a man, forty years of age; United States; married; laborer; accustomed to heavy work. He gave a history of syphilis, and had been a constant drinker of ardent spirits for several years. He first noticed pulsation in the epigastrium four years ago. This was followed by constant pain in the back, and later on pain developed in the region of the pulsation. Within a time which he variously stated as ranging from one to two years, he noticed a tumor in the epigastric region; it was tender to pressure but otherwise it was not inconvenient. He gave a history of having received a blow in the epigastrium a short time previous to his admission, which was followed by symptoms of collapse. He was admitted into the New York Hospital on October 28, 1882, and died the following afternoon with symptoms of internal hemorrhage. At the autopsy, there was considerable blood in the peritoneal cavity. Only the part presented was removed from the body. It consists of a section of the abdominal aorta four inches in length, connected with which was an aneurismal sac about three inches in diameter, containing recently coagulated blood and fibrin. This sac communicated with the aorta by an opening one inch in diameter. Extending from the upper and anterior part of this sac was the superior mesenteric artery, the first four inches of which were distended into an elongated sac, the wall of which was continuous with that of the sac below it. This portion of the artery was uniform in size, and about one and a half inch in diameter, and was filled with laminated fibrin.

The Society then went into executive session.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, October 24, 1882.

T. M. Markoe, M.D., President, in the Chair.

ANEURISM BY ANASTOMOSIS.

Dr. McBurney presented a patient with the following history: A boy, eleven years of age, had a disease of the vessels which was almost entirely confined to the external ear. He had been under the charge of Dr. Grovesteen. It had been ascertained that at birth there was possibly a slight difference in color of the two ears, but it was not until the boy was two years old that the difference was noticed by others than the mother. Since that time the increase in the size of the ear had been marked. It pulsated throughout, and the pulsations could be felt at different points distinctly. It had bled at different times considerably, particularly at a point just at the entrance of the external meatus. The growth had lately steadily increased in size. The pulsation could be entirely shut off by pressure upon the common carotid artery. Over the whole surface of the growth there was a distinct bruit, which could be heard with the stethoscope. The diagnosis was aneurism by anastomosis. The growth had been injected with persulphate of iron on one occasion; hot needles had been thrust into it on two occasions, and ergotine had also been injected. All these methods of treatment had been accompanied by considerable hemorrhage, which was somewhat difficult to arrest. The enlargement of the external jugular vein was marked, and the posterior auricular artery was also decidedly enlarged.

Dr. W. T. Bull about three months ago saw precisely a similar aneurism in the upper lip of a child about one year old. The lip was fully three times the normal size. It had been in the President's service in the New York Hospital, where the four arteries leading to the growth had been ligated with only temporary effect upon the pulsation. Dr. Bull attempted to dissect the growth out, but finding that it would be impossible to do so he cut away all the tissue involved. There was considerable hemorrhage, but it was fairly controlled by ligating all the bleeding vessels. The cavity was stuffed with iodoform gauze, and the wound healed without accident.

Dr. Sabine said that Mr. Teale, of Leeds, had directed attention to the fact that in many of these cases the growth had a capsule, and that it could be dissected out with comparatively little hemorrhage.

Dr. Briddon said he had removed several with the knife without more hemorrhage than usually occurred in the removal of the same amount of tissue in any other part. His plan was to cut well to the outside of the growth.

Dr. Howe then read a paper on

PERITONEAL TRANSFUSION.

Dr. McBurney presented a specimen of

SPONTANEOUS PERFORATION OF THE BLADDER,

with the following history: It was removed from the body of a man aged thirty-four, who entered his service in Bellevue Hospital with the ordinary history of urethral stricture, and suffering from retention of urine. Otherwise he was in apparent health. A small catheter was introduced and twelve ounces of urine were withdrawn from the bladder, although he said that he had not passed water for thirty-six hours. On the second day ater his admission he got out of bed and went to the water-closet for the purpose of making water. Within half an hour afterward he had a severe chill and when Dr. McBurney saw him one hour afterward the patient was in collapse. Examination of the abdomen revealed an extensive blush over the right half of the lower part, extending into the right iliac fossa. Dr. McBurney inferred that the man was suffering from rupture of the bladder. At the autopsy there was found a perfectly round opening in the posterior wall of the bladder, and from its appearance he thought it was the termination of a long-standing ulceration. The extravasation was post-peritoneal and entirely confined to the pelvic region. The only instrument introduced while the patient was in the hospital was a small elastic catheter. With reference to what instruments had been used outside he had no knowledge whatever. The apparent good condition of the patient, the sudden occurrence of the chill and development of profound collapse, were the noticeable clinical features, and the limited extravasation of urine found at the post-mortem.

The President remarked that a distended bladder was a favorable condition for spontaneous rupture, and that the opening had the appearance of one which had been made by some instrument.

Dr. Post suggested that an instrument would not be likely to produce perforation at such a distance from the urethra.

The Society then proceeded to the transaction of miscellaneous business.

What a Blind Man Sees.—The French scientist, Plateau, who for the last forty years has been totally blind, has just published a little paper on the sensations which he experiences in his eyes. He states that he has constantly in his eyes the sensations of light; his field of vision is divided into spaces, of which some are very clear, and others sombre or almost black. These spaces are not precisely limited, but run into each other at their borders; but what is remarkable is that their general tint alternates between gray and reddish. For example, if it be gray M. Plateau perceives now, in a few hours it will be red; then, a few hours later, the gray again, and so on. The reddish tint is that obtained by mixing pale rose-color, or rather flesh color, with a certain quantity of black. The relative arrangement of these different spaces is always the same, but the intensity of their tints varies. The central space shows itself sometimes very clear, and sometimes very sombre; above and below, as far as the limits of the visual field, there is sometimes clearness, sometimes obscurity. It is the same with the space to the left; there is generally a vertical, almost black band, and the space to the right of that, as far as its limit, is almost always clear and ruddy. These appearances seem to M. Plateau to fill the whole extent of his ordinary visual field. He believes the distance at which they are is small. These same appearances follow all the movements of the eyes, as if they resulted from a modification of the retinas. It appears to M. Plateau that the two eyes do not participate in the same manner in the tints in question; but he is absolutely incapable of distinguishing what belongs to the one from what belongs to the other. He has not been able to establish any coincidence between the changes of the general tint and the work of digestion.—*Boston Journal of Chemistry*, September, 1882.

Correspondence.

MEDICAL LATIN: A REJOINDER BY CHARLES RICE, PH.D., NEW YORK.

To the Editor of The Medical Record.

Sir: In No. 21 of the current volume of The Medical Record we find a paper entitled "Medical Latin," by John A. Armstrong, Esq., of Brooklyn. While we are in perfect accord with the author as to his general statements regarding the legitimate use of Latin in medical practice, as well as the almost general lack, among physicians and pharmacists, of a thorough knowledge of this language—which lack is not to be wondered at in these days of rapid transit—yet the paper contains some incorrect and misleading statements, which, if left uncontradicted, might expose certain features of the nomenclature adopted in the new United States Pharmacopœia to false and undeserved criticism.

Our dissension from the author's remarks begins with that portion of the paper (p. 567, first column, line four from below) where he commences to discuss the gender of such modern-Latin technical terms as *Carbonas*, *Murias*, *Sulphas*. He states that the London and Edinburgh Colleges of Physicians assigned to these nouns different genders,

> "the London college rightly, according to analogy, making them feminine, and the Edinburgh college, for no apparent reason, masculine."

He seems to be also surprised at the "extraordinary mutability of gender" of these terms, since he finds them used as masculines and as neuters in Mayne's Dispensatory, and in Gray's supplement even of all three genders. Still, he realizes the fact that this seeming versatility is due, in such works of reference, to the necessity of correctly quoting the original texts from which they are compiled. But finally he says (p. 568):

> "It is in the highest degree creditable to the ability and care of the gentlemen hitherto engaged in the compilation of the United States Pharmacopœia, that their work is disfigured by no such blunders. Such words as *Carbonas*, *Sulphas*, etc., in the United States Pharmacopœia, are rightly made to follow the analogy of their class of nouns of the third declension, and are qualified by adjectives in the feminine gender."

The question of the correct gender of these modern chemical nouns formed one of the many topics which had to be carefully considered by the Sub-committee on Nomenclature of the Committee of Revision of the United States Pharmacopœia of 1880, of which subcommittee the writer had the honor to be a member; and it was conclusively proved that the action of the Revision Committee of 1860, which had changed them from masculines to feminines, was based on error. Indeed, it was shown that there is no analogy whatever in Latin for the feminine gender, in the case of these nouns; it being altogether wrong to bring them into one category with the large class of Latin feminines ending in *-tas* (as *œstas*, *pietas*, *brevitas*, etc.). We will not occupy valuable space here by reiterating the arguments already published in *New Remedies*, 1882, p. 58, where this whole question has been fully discussed, and to which we must refer the reader. It may be considered as finally settled that these terms should *only* be used as *masculines*, and they have, accordingly, been restored to this gender by the present Committee of Revision.

The author of the paper next proceeds to say:

> "We find, however, in a recent report of the American Pharmaceutical Association's Committee on the Revision of the United States Pharmacopœia, p. 119, the expression *rhus glabra* recommended to take the place of *rhus glabrum*, but no reason assigned for the proposed change. Why *rhus glabra? Rhus glabra* is very proper sometimes; but the propriety of writing *rhus glabra* or *rhus glabrum* must depend on the part of the tree which it is meant to designate. If the bark or leaves are meant, by all means let us have *rhus glabra;* if the berry or seeds, *rhus glabrum*. Now our officinal *rhus* is the berry or seed, and the noun is of the second declension. But where the name of a fruit-tree is of the second declension feminine, and ends in *us*, the name of the fruit is neuter; as *malus*, an apple-tree; *malum*, an apple; *pirus*, a pear-tree; *pirum*, a pear. *Rhus*, the fruit or berry, is exceptional in not taking the neuter termination; but Pliny and Celsus both make *rhus* neuter when they use it to express the *berry* or seed of the *Syrian sumach*. *Stet rhus glabrum*."

We regret to say that this passage betrays the incompetency of the author to discuss and criticise philological questions requiring more than a superficial knowledge of grammar. Were it not that the case in point has a bearing upon the adopted text of the new Pharmacopœia, and that the accuracy of certain expressions therein is impugned by the author's statements in these columns, we would have passed the latter by with silence. As it is, we feel in duty bound to make a reply, but we shall be as brief as possible.

The writer of these lines, who edited the Report of the Committee of Revision of the United States Pharmacopœia of the American Pharmaceutical Association, and who is responsible for the proposition to change the *Rhus glabrum* of the Pharmacopœia into *Rhus glabra*, did not assign any reason for it, simply because he thought the reason would be self-evident. As the new Pharmacopœia has adopted the alteration, it seems right and proper to state why the change is justified.

Among the rules of pharmacopœial nomenclature of crude vegetable drugs is one, recognized in this country for a long time, but more generally applied in the new Pharmacopœia, which directs that the *botanical* genus- or species-name shall denote the particular *part* of the plant which is officinal, provided only *one* such part is used.

Examples of genus-names: Capsicum (meaning the fruit); Hedeoma (meaning the leaves and tops); Spigelia (meaning the rhizome and rootlets), etc.

Examples of species-names: Belladonna, Dulcamara, Frangula, etc.

In some cases it became necessary to use *both* genus- and species-name, to distinguish the drug from an allied species which might be also officinal, or at least in common use, and might be confounded with it.

Examples: Quercus alba; Mentha piperita; Mentha viridis; Veratrum viride; Prunus virginiana; Rosa gallica; *Rhus glabra*, etc.

These terms are precisely the same as those used to denote the *plant* itself,[1] and no change of gender or termination is permitted by reason of any meta-

[1] Except in the case of *Prunus virginiana*, which term has been retained, for obvious reasons.

phorical application of these terms upon different parts of the plant, as the leaves, fruit, root, etc. If it so happens that the fruit of any particular plant has a common, generally used name, the latter may be substituted for it; for instance, *Prunum* (the prune) is the common and also pharmacopœial name for "the fruit of *Prunus domestica*." The Pharmacopœia could have called it also, in conformity with the above rule, *Prunus domestica* (the species-name being added to distinguish it from *Prunus virginiana*); and if there were no other "Prunus" in the Pharmacopœia it would have sufficed to call it *Prunus*. But it would be incorrect to draw the adjective of the *plant* to the *part of the plant*, and to say *Prunum domesticum*. We could not wish for a better example than *Rhus glabra* to show how inadmissible such a change would be. This particular species of *Rhus* was called *glabra* by botanists, because it differs from other species of *Rhus* by the fact that the stem and leaves of the *plant* are quite smooth and free from the fine hairy covering so common in other species. That is, the *plant* is *glabrous*. But if we were to write *Rhus glabrum* to designate the fruit, we would ascribe to the latter a property diametrically opposed to fact; the sumac berry being densely covered with acid crimson hairs, just like the fruits of other species of *Rhus*.

The last portion of the paragraph last cited contains a remarkable collection of mistakes and misstatements, as will be seen from the following:

First.—*Rhus* is *not* a noun of the *second* declension, as the author says. In Latin it belongs to the *third* declension, and has in the genetive [1] usually rhois. A contracted form of this is *rhus* (rhūs),[2] or even *rus* (rūs).[3] The genitive *rhi*, which would be that of the second declension, is unauthenticated by any good manuscripts.[4]

Second.—The alleged rule about neuter fruit-names in *um*, from feminine tree-names in *us* is not without exceptions; for instance, *ficus*, *caprificus*, *balanus*, etc., all of which denote both tree and fruit. The form *rhum* [5] occurs, but this is the accus. sing. of *rhus* in the third declension.

Third.—There is not a single passage in Pliny, from which it could be proved that *rhus*, as name of the fruit, must be neuter. The words *quod rhum diximus*, 29, 3, (11), 50 are explained by another passage where it is decidedly feminine, viz.: *quod Rhun Syriacam vocant*, 14, 14, (79), 129; yes, it even occurs as masculine: *rhus qui erythros appellatur, semen est hujus fruticis*, 24, 11, (55), 93.[6]

And Celsus quotes the word *rhus* only *once* (6, 11), and then decidedly as a masculine: *rhus quem Syriacum vocant* (meaning the fruit).

Hence: *Stet Rhus glabra!*

CHARLES RICE, Ph.D.

NEW YORK, November 23, 1882.

[1] The genetive occurs rarely in the older writers; but the medical authors, whose works contain many formulæ giving the ingredients in the genetive, generally use this form; f. i., *Scribonius Largus*, De compos. med., 142, etc.

[2] For instance: (*Pseudo-*) *Plinius Secundus*, *De Medic.* (ed Rose), 2, 4 (where some MSS. read rōs); *Scribonius Largus*, 111, 113, 256.

[3] *Cassius Felix*, *De Medicina*, 42, 48, 73. The similarity of the form *rus* to Latin *ros* (*roris*), the dew, afterward led to a curious confusion. Pliny, the elder, and other authors denote by *Rhus Syriacus* (or *Syriaca*) a species of sumac (probably *Rhus Coriaria* L.); later writers (as *Gargilius Martialis*, *De Medic.*, 41, page 182; Columella, 9, 13, 5, 12, 42, 3; *Palladius Martialis*, 15, 1) make the genetive of this *roris Syriaci*, after the analogy of *roris marini* (gen. of *ros marinus*). And we even find *Rhus Syriacus* used as a synonym of *ros marinus* by *Theodorus Priscianus* and *Marcellus Empiricus* (f. i., page 367, D.).

[4] In Greek, the corresponding noun ῥοῦς may take the terminations of either the second or the third declension—ῥοῦ or ῥοῦς.

[5] Also rhun.

[6] In later authors it occurs as neuter: f. i. *Cassius Felix*, 39; *Apicius*, *De Re Coquin.*, 10, 403, 477, etc.

QUININE IN SPASMODIC COLIC.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Some months ago, being in Professor Frank Hamilton's office, and saying that I had not read his paper on "Strangulated Hernia," he kindly handed me, not only that, but the one also on "Posture in Colic," both of which I have read with great interest, and the reading of which has brought to a focus a half-formed resolution to send you a few lines upon this last subject. That resolve is now three years old. It has been held in abeyance only to make assurance doubly sure, and because I am not at all inclined to "rush into print." I should still be silent if not fully convinced that the suggestion I shall make will be of benefit to some sufferer from this peculiarly distressing complaint. Never having satisfied myself as to the cause of colic, I am fully prepared to accept Dr. Hamilton's theory of its origin as very probable, and also the conclusion that sometimes posture will cure it.

Without going into its pathology at all, the affection to which I refer is on this wise: First, a sense of abdominal fulness, not amounting to uneasiness even. After some time, possibly an hour, a trace of uneasy feeling lasting for a few seconds—after an interval of quiet, longer or shorter, a dart of pain at some point in the abdomen, enough to call attention, and again an interval of quiet, succeeded in a few moments by another and severer evidence of coming trouble. This state of things, which has always seemed like an alternate spasm and relaxation, may continue for an hour, or hours, and is at last succeeded by a pain which is agonizing and continuous, just as if the intestines had been suddenly folded and gripped in the hands of a strong man, and were being wrung as a washerwoman wrings clothing. I speak of this matter from the standpoint of a life-long experience. From boyhood until three years ago I have had abundant opportunities of studying this trouble in all its phases. That and a constantly recurring severe headache have always been accustomed, but very unwelcome visitors—so much so as to interfere very materially with my business. It would be without good to enumerate the remedies tried for the colic during this long period; ranging through the list of cathartics, antispasmodics, emetics, aromatics, stimulants, injections, alkalies, mechanical applications, anodynes, sedatives, and finally chloroform, for none of them were at all reliable, except possibly morphine; but this was exceedingly objectionable, leaving always behind a nausea which lasted for days, and was about as distressing as the original difficulty.

About three years ago, having endured a severe headache for some days, I concluded to try a dose of quinine, with the hope that it might bring relief, as it had done occasionally before, but before reaching my office from a lengthy visit, decided symptoms of colic were developed. Immediately on arriving I took ten grains of quinine, hoping thus to give the headache its *coup-de-grace*, and so be allowed a free and uninterrupted contest with the colic. A patient coming in, claimed my attention for perhaps half an hour, and when allowed again to think of myself, I was surprised to find that the pain had not increased.

This was such an unusual thing, and so contrary to years of experience, that I could hardly believe in it. I, desiring to know what would follow, sat down quietly to wait and watch. Soon there began to come a sense of languor and drowsiness, and a

hope, amounting after a time to a certainty, that for once I had escaped some hours or days of suffering. The question very naturally came to me, Had the quinine anything to do with this unusual ending? Believing that it had, I of course determined to try it again. In the next two attacks the quinine was taken early, and with entire success. Being now satisfied of its power to prevent an attack, if taken in the early stages, and desiring to know what it would do if left to a later period, I allowed the next attack to progress until it was well established and certain of being severe. Then the quinine was taken, and in half an hour the pain was gone, and nothing remained but a sense of ease and safety.

Since then, now three years, I have taken it myself, and given it to many patients during these attacks, with complete success.

Remembering with gratitude the kind services of my professional brethren during many occasions of this kind in early professional life, and how consoling their care and presence was in these hours of suffering and anxiety, I have always been careful to remain with these patients, sometimes at great inconvenience, until they were better. Now I send a capsule containing eight or ten grains of quinine, and pay no further attention, being quite sure that I have done for them the very best thing possible, and have thus been saved many a night of tedious and unsatisfactory service.

N. R. DERBY, M.D.

BERGEN POINT, N. J.

TRISMUS NASCENTIUM AND ADHERENT PREPUCE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Without being positive, I have been unde the impression that trismus nascentium is much more prevalent in portions of the Southern States than it is anywhere at the North.

However this may be, there is no doubt of its very great prevalence in many portions of the Southern country, and especially among the colored race, although not confined by any means to this people. My experience is that it is a fearfully fatal malady, and takes off thousands of infants within the first fifteen days of their life. About a year ago, when examining a case, I discovered that there was adhesion of the prepuce to the glans penis, accompanied with the usual priapism. I circumcised the child, after having torn up the adhesions, and then gave two grains of hydrate of chloral every two to four hours, keeping down the spasms as well as I could with this agent, and producing nearly constant sleep, and the case recovered. This was the first recovery of trismus nascentium within my experience, which has been very considerable in twenty-seven years. The result could not have been entirely due to the chloral, as I had often given this agent before, and pushed it as far as safety would allow. But this case does not stand alone, as I have just had another recovery from the same procedure of treatment. I am also informed that a case in the practice of Dr. Wiechelbaum, of this town, has recovered under the same treatment.

I think, too, that I should have had more cases to report but for the fact that experience has taught me to examine every male child carefully within the first few days of its birth, and break up the adhesions betwixt the glans and the prepuce where they occur, and split the prepuce in some instances and circumcise in others. I have been greatly surprised at the very large percentum of cases where adhesion exists, and have no doubt that this surprise will be shared by other general practitioners who will take the trouble to examine every male child born under their auspices. Further good results will follow, for there are in my experience many children made very restless and nervous, which conditions last through the first year of life, and end in the form of paralysis, for which Dr. Sayre, of New York, first pointed out the remedy of circumcision.

I am not aware that these conditions have ever been treated upon in medical books before, and are merely hints drawn from experience and which I think every thoughtful practitioner will appreciate. It is the common belief of most physicians that trismus neonatorum is due principally, if not always, to trouble in the cord. My belief is that it may be due in some instances to the navel cord, but by no means in my case. Adhesion of the prepuce produces a certain percentage in male children, and cold draughts of air is an active factor in causing the disorder in both males and females. I have the impression that it is much more common in the male child than in the female, but intend to satisfy my mind upon this point by hereafter keeping notes. The colored population, as is well known, are a very careless people, and live generally in houses badly built, which abound in air-holes. During the winter season children born in such places are very apt to have this disease. Yours truly,

J. G. THOMAS, M.D.

SAVANNAH, GA., November 16, 1882.

MEDICAL EDUCATION AND THE AMERICAN ACADEMY OF MEDICINE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In THE RECORD for November 4, 1882, is a report of the annual meeting of the Academy of Medicine. Its attempt to elevate the standing of medicine as a learned profession is worthy of praise.

Some of the conclusions of Dr. Beard, however, may not meet with general approval.

He advises that "if a student must economize in time or means, let it be in the professional and not in the academical training."

Again, praising the superiority of Germany in medical education, the Germans are spoken of as "thinkers, philosophers, men with abstract ideas, with inherited genius for theory and for language." He admits that "the defects of Germany are mainly on the side of practical application of science and philosophy to daily wants," and that "in medicine their special great defect is in the treatment of disease." The Germans, therefore, are good theorists, but fail practically. Our young men, however, are to be encouraged in following their example, and "to study and travel in Germany." Because that, "outside of a small circle of German-taught experts, the medical literature and the medical practice of England is from five to fifteen years behind Germany and America." And because "the profession as a profession has slight honor, the position of its individual members coming from individual character despite their calling." What an admission to make! Would it not be better for those doctors to whom their position comes through "individual character despite their calling" if they had chosen some other life work? Happily there are some of us who do

not feel that our "profession as a profession is without honor."

About eight per cent. of medical men in the United States are college graduates. Perhaps some of the remaining ninety-two per cent., not thus favored, may also wish for the advancement of medical reform, but without the practical being sacrificed to the theoretical teaching. So long as there are ninety teaching bodies, each possessing the power of granting not only a degree in medicine, but also a license to practise; so long as but thirteen of these ninety schools require any preliminary examinations; so long as seventy-two "regular" schools have one thousand one hundred and thirty-one instructors interested in the *successful* examinations of two thousand six hundred and seventy-three graduates in one year, will the profession as a profession deserve slight honor.

True reform will begin when the power of granting a license to practise medicine is taken out of the hands of interested teachers and placed under the control of those who seek the welfare of the profession at large; when a fixed standard in general education is compulsory before the student can proceed to the examination in medicine. This can be accomplished without shutting the doors against all but college graduates.

Then, and then only, will ignorant students cease to find entrance, through cheap institutions, into what should be an honorable profession.

The Academy of Medicine alone, with its select few, cannot work a reform in which all medical men are interested. Neither is it desirable that the teachings of one of its members, as quoted, should ever receive favor.

NEMO.

HOW SOME MEDICAL MEN ARE EDUCATED.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In a recent issue I noticed a communication signed "Claudius," which expresses so much good sentiment that I wish to re-echo his statements in a somewhat different manner, *re* the specialist. While C. speaks of one who had ability or volubility sufficient to become the proud "pater" of a pamphlet, miserable or otherwise, my remarks will refer to a different species of the would-be-man-of-particular-talent. Details of practical experience with one or two will best illustrate what I wish to bring out.

CASE I.—Some three years ago there was in a rural school, not far from here, acting in capacity of teacher, a man; and let no one who has read thus far think that because a teacher he was devoid of ambition. One day, on going to the post-office, he found there an announcement of a so-called medical school which in those days flourished out West. A sudden idea takes hold of our hero—something beside the realization of which the occupation of teaching was nowhere. He counted the cost, discovered that, by restricting his diet to "beans," his wardrobe to its present dimensions, and by means of occasional odds and ends which he could acquire by portering, he would be enabled to take a course and graduate there. Oh, then what a field would be open before him—a field that nowhere on all its vast plain would be seen such a giant as he would prove himself to be. That was three years ago, and for nearly *two* years his card has figured in our papers as specialist in "diseases of women" and "surgery."

CASE II.—Three or four years ago a great many of the farmers of a certain county in Pennsylvania were quite familiar with a certain vender of a patent sulky horse-rake. For some months (twenty-four or more) that "ambitious rake vender" has been a full fledged M.D., and is also advertising himself as a specialist on diseases of women. Some time ago he was summoned to attend a case of "morning sickness," well marked and uncomplicated. With great gravity he told the friends that "Mrs. —— was suffering from a severe attack of malarial fever." He prescribed quinine!

My object in writing this is not to ridicule the plodding, earnest, though poor student, but to show what ignorance, combined with conceit, is capable of doing—to endeavor to awaken the intelligent portion of the profession to the fact that men such as these are lowering, and that permanently, our profession in the estimation of the laity.

Ours is a "noble profession," but I deem it *noble* only as the individual members of it render it so, both in education, precept, and practice. Of all quacks the licensed quack is the worst, and what better are specialists (or even general practitioners of the same grade) of the above type than the brazen advertiser who offers to "elevate wombs at a dollar a bottle," or the man who declares himself to be the "possessor of the jewelled medal, the gift of the American National Association of Medicine," or the reverend gentleman who practised self-abuse and could find no remedy short of the natives of some undiscovered island! Are we who endeavor to act conscientiously, and with all the possible light of modern science beaming through speculum and guiding the hands of the real gynecologist and surgeon, to calmly stand by and see the essential dignity and honor of our profession trodden under feet by such swindling knaves? Does not home, love, love of country, and all the finer feelings impel us to say we will not see a member of our race "cut and hacked" by the self-styled and unskilful surgeon, nor fair woman's finest sense shocked by every "boasting ass" who can buy a speculum—at least not as long as a "few" can become incorporated by an act of legislature for the purpose, not of advancing scientific work and aiding in the alleviation of human suffering, but only for mercenary ends? We have good schools and good men, but I will venture the assertion that out of every five doctors graduating in the whole United States four of them are not competent to intelligently practise medicine, surgery, and midwifery.

Yours very truly, S.

THE USES AND ABUSES OF THE ELECTRIC BATH.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Will you allow me a little space in your valuable journal to give my explanations for Dr. Wm. F. Hutchinson's failures in the use of the electric bath, as published in THE RECORD of October 21st?

The four electrodes made stationary in the tub, two in the upper and two in the lower end of the tub, with the faradic current passing through them to the patient, would produce deleterious effects, somewhat similar (if I may use the comparison) to lifting a rheumatic patient by the nape of the neck and the feet. Anyone may satisfy themselves on this point by placing both hands in the water in the middle of the tub, and extending one toward the

head and the other toward the foot at the same time; if the current is very strong it will become almost or quite unbearable before they reach the electrodes, when it is hardly perceptible with the hands near together. He says, "the constant current used was from a permanent series of forty two-gallon Weiss elements, which produced an even and steady flow capable of minute division by selectors and a wire rheostat." This is by far too strong a galvanic current to be used for any considerable length of time without producing depressing and injurious effects. The temperature of the bath, he says, "was carefully maintained at such a height as was perfectly comfortable, usually about 80° F."

How could it be possible that a feeble rheumatic patient could remain in water fifteen minutes with the temperature nearly 20° below the normal temperature of the body, without "a sensation of chilliness, followed by a stroke of cold"?

I have prescribed and used the electro-thermal bath in my practice for twenty-one years. After I had the proper key-board or switch-board and the appropriate number of electrodes in the tub (improvements I had made from the Dr. Young patent the second year of my use of the bath), I prevented the unfavorable results which had sometimes occurred; and when my instructions to my operators were fully carried out, not one in one hundred treated ever complained of the symptoms described by Dr. Hutchinson. I never allow a patient to take my electro-thermal bath or any other electrical treatment without first being examined by me or a physician who understands my means, and the directions for the treatment are given to the operator.

I have asked my bookkeeper and cashier, who has had this position seventeen years, to give me the average number of electro-thermal baths given in my institute during that time. The average per year is over six thousand. I would be pleased to quote from my work on "The Electro-Thermal Bath," page 16, how to prepare the bath for a patient: "It is necessary to know if the patient is very sensitive to warm or cold water; the bath should be of a temperature to meet the feelings of the patient pleasurably on first going into it. As a general rule, it should be prepared at 98° F., and gradually increased till it reaches in some extreme cases 110°; the guide for increasing the temperature must be the patient's feelings, as no one set rule can be given for every case. The time in the bath ranges from eight to thirty minutes; the effects of this bath will serve as a guide to the time occupied in subsequent treatment of the case. The patient lies down in the bath, being covered at the same time with a canton-flannel sheet, the head resting on a sponge or air-pillow, which is wrapped in a napkin and placed above the insulator, the feet resting against the foot of the tub, unless the patient is too short to reach it, then they should be supported by a foot-adjuster; a small napkin wet in cold water, wrung out so as not to drip, should be placed on the forehead."

I am confident that there is to be a new era in our profession in the prescribing and using medical electricity. I think it is not far in the future when physicians will become thoroughly educated in its use, and there will be medical electrical operators as thoroughly instructed as the professional nurses. Then the physician will prescribe electricity, the instructions to be carried out by the operator, as he does drugs, the prescriptions to be filled by the druggist, and directions to be carried out by the nurse. And frequently he may prescribe for the same patient both medicine and electricity. If static electricity is prescribed, the quantity and intensity are two important factors, as well as the kind of electrodes to be used in a given case. And so it is with the faradic and galvanic currents. In the treatment of the patient in the bath, the proper temperature of the water is nearly as essential as directing the currents.

JUSTIN HAYES, M.D.

CHICAGO, ILL.

New Instruments.

A NEW MEDICAL BATTERY.

BY A. M. ROSEBRUGH, M.D.,

TORONTO, CANADA.

WITHIN the last few years decided improvements have been made in electro-therapeutic apparatus. This improvement is conspicuous in the construction of portable galvanic and portable faradic batteries, as well as in the instruments where the two are combined. The thanks of the profession are especially due to the American manufacturers and inventors for what has been accomplished in this direction. But perfection has not yet been attained; the model battery has yet to be produced. These batteries, though highly finished—even ornamental—are still too complicate and too difficult to be kept in working order, and withal too expensive, to become popular with the profession. We are not all practical electricians, and we require a battery that is simple in its construction, almost automatic in its action, and easily kept in order. As a contribution to this end, I propose to describe a modification of the portable galvano-faradic battery which I have recently adopted with advantage.

As a basis of the new battery I took one similar to that of Dr. McIntosh. In batteries of this description the horizontal plate to which the elements are attached is padded on the under side to form a hydrostat plate, one-half of which is used to cover the acid-cells when the battery is not in action, while the elements, attached to the remaining half, are suspended in a drip-cup by the side of said acid-cells. The end of each hydrostat plate is pressed down upon the cells by means of spring bolts and clamping screws. This latter arrangement is quite effective but very inconvenient, as much time is spent in clamping and unclamping the plates—not merely when the battery is taken to the bedside of the patient, but also whenever the battery is used. In the new battery the pressure upon the hydrostat plates is made automatic by simply placing bearings upon the lid of the battery case. When the lid is closed the acid-cells are firmly covered, and when the lid is open the bearings are removed and the plates may be moved without loss of time.

Again, in the McIntosh battery, when the apparatus is used each hydrostat plate (with the elements attached) is raised from the drip-cup, rotated upon its horizontal axis, and the elements immersed in the acid solution.

When the *séance* is ended, each hydrostat plate is lifted from the fluid, and, before it can be replaced in the drip-cup, must again be rotated upon its horizontal axis. This manipulation is not specially inconvenient, but unfortunately the dripping of the acid solution from the zinc and carbon elements

commences before the horizontal rotation is completed, and, unless very special care is taken, the metal parts on contiguous plates are liable to become spattered. This is obviated by the expedient illustrated in the accompanying figures.

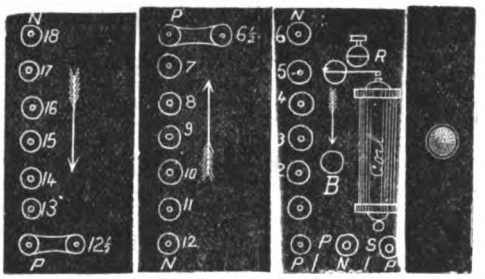


FIG. 1.—The elements at rest.

Fig. 1 represents the position of the hydrostat plates of an eighteen-cell combined galvano-faradic battery when the elements are at rest. The elements from 1 to 18 are resting in the drip-cups, six pairs being attached to each of the three hydrostat plates, and on the left hand side thereof. The overlapping part of each hydrostat plate covers the top of six acid cells, which latter are to the right of each drip cup. In the McIntosh battery the elements of any one series, as from 7 to 12, can be immersed in two ways: first, by lifting and then rotating on the horizontal axis, and second by allowing the projecting hydrostat plate to override the screw-cup, on the adjoining plate to the right (1 to 6). Both methods are objectionable, the latter obviously so, and the former for reasons already named.

In the modified apparatus the battery-case is elongated to the right, to the extent of half the width of a hydrostat plate, so as to provide a space for overlapping to that extent. When the elements of the first series (1 to 6) are immersed, space is left for the overlapping of the hydrostat plate of the second series, which, in turn, makes way for the third. When the third series of elements are immersed, the end drip-cup to the left is left uncovered. This may be covered by the narrow plate or cover removed from the right, as represented in Fig. 2.

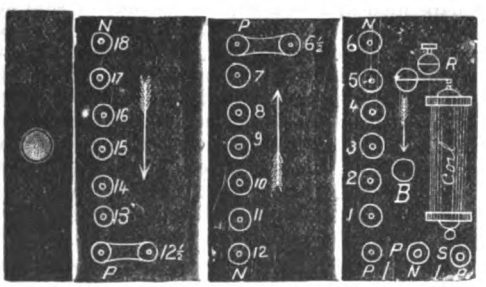


FIG. 2.—The elements immersed.

The screw-cups 6 and 6½ of the first and second series, and 12 and 12½ of the second and third series, are connected by a spring or wire, this connection being facilitated by the supplemental posts 6½ and 12½. The positive electrode is connected with No. 1, and the negative with No. 18. The cord of the negative electrode is bifurcated, so that, by a step by step arrangement, the number of elements in circuit may be increased or diminished gradually without breaking the circuit.

Some batteries are provided with an extra acid-cell and an extra pair of elements for the faradic coil—the extra cell being placed to the right of the coil. When this is the case, a space for the overlapping of the hydrostat plate is afforded by simply uncovering this extra acid-cell.

By these modifications the battery is ready for use as soon as the lid is open. The elements may be displaced to the right and back again to the left without loss of time and without being rotated; and, moreover, in the original battery, any one of the zinc or carbon plates may be easily removed, repaired, or replaced without the help of an electrician.

To sum up, the advantages claimed are as follows: 1, cleanliness; 2, economy of time; 3, simplicity in management; 4, simplicity of construction.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 18, 1882, *to November* 25, 1882.

ALDEN, CHARLES H., Major and Surgeon at expiration of present leave to report to the Commanding General, Department of Dakota, for assignment to duty. S. O. 273, par. 10, A. G. O., November 23, 1882.

BARNETT, RICHARDS, Captain and Assistant Surgeon, the leave of absence granted November 1, 1882, is extended five months. S. O. 273, par. 11, A. G. O., November 23, 1882.

BILL, JOSEPH H., Major and Surgeon, at expiration of present leave to report to the Commanding General, Department of the Platte for assignment to duty. S. O. 273, par. 10, A. G. O., November 23, 1882.

BROWN, PAUL R., Assistant Surgeon, the leave of absence granted May 25, 1882, is extended six months on Surgeon's certificate of disability. S. O. 273, par. 7, A. G. O., November 23, 1882.

CLEARY, PETER J. A., Captain and Assistant-Surgeon, now awaiting orders, will report to the Commanding General, Department of Dakota, for assignment to duty. S. O. 273, par. 10, A. G. O., November 23, 1882.

CORSON, JOSEPH K., Assistant-Surgeon, is assigned to duty at Jefferson Barracks, Mo. S. O. 273, par. 8, A. G. O., November 23, 1882.

MCKEE, JAMES C., Major and Surgeon, now awaiting orders, is assigned to duty in the Department of California. S. O. 273, par. 10, A. G. O., November 23, 1882.

MUNDAY, BENJAMIN, First Lieutenant, Assistant-Surgeon, will be relieved from duty at Willetts Point, N. Y., and assigned to duty in the Department of the Columbia. S. O. 273, par. 10, A. G. O., November 23, 1882.

SMITH, ANDREW K., Major and Surgeon, at the expiration of his present sick leave will be assigned to duty at Willetts Point, N. Y. S. O. 273, par. 10, A. G. O., November 23, 1882.

WHOOPING-COUGH IN A PATIENT OVER EIGHTY.—A rare case of this nature is reported by Dr. W. Hale White in the *British Medical Journal*. There were no signs of bronchitis in the lungs. The patient could not remember whether she had had the disease when she was young.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 25, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Nov. 18, 1882.	0	16	25	1	9	47	0	0
Nov. 25, 1882.	0	9	32	3	9	51	0	0

The Typhoid Fever Epidemic in Paris has continued to decrease in violence. This decrease has taken place, we are told, despite any precautions taken in the matter of drinking water or of household disinfection. The epidemic is thought to have been due to the bad state of the tenement houses and other crowded dwellings. The French theory of typhoid fever admits that the disease may be developed spontaneously by infection or specifically by contagion; but the great majority of French authors do not accept the unity of the typhoigenetic poison.

A Bradshaw Lectureship has been established by the will of the late Mr. Bradshaw. The annual lecture this year is to be given by Sir James Paget.

A New Disease.—It has been observed that the manufacture of bichromate of potash has a singular effect upon the nose, manifesting itself in a curious manner. A little hole is formed in the septum of the nose, and increases gradually until the partition entirely disappears, with the exception of its lower part, so that to a superficial observer there is nothing except a little outward depression. It is noticed that as soon as the partition is destroyed, the process appears to stop there, neither the lungs, air-tubes, nor throat being in the least degree affected. Some workmen at the chrome factory in Russia, where the disease has been chiefly watched, have been employed for ten years and remained unaffected, while with others the hole in the nose begins to be formed after one month's work. But that the disease is something more than an individual peculiarity, is evident from the fact that an inspection of all the hands proved that more than fifty per cent. of the men had diseased noses. The early symptoms are a slight tickling of the part affected, followed by bleeding, but with no uncomfortable feelings; and, in fact, the destructive process is painless.

Professor Pettenkofer has been raised to the rank of nobility by the King of Bavaria, on account of his services to medical science and hygiene.

A College Professor on Trial.—Prof. Frothingham, of the medical department of the Michigan University, has had a hearing before the faculty on charges preferred by Mr. Morgan that in his lectures he had made sneering remarks against Christianity and had said that all ministers were liars. A large number of witnesses were examined, most of whom denied that such language as that attributed to Prof. Frothingham had been used.

The Source of Nourishment of the Cornea.—Until quite recently it has been generally believed that the cornea draws its nourishment from the aqueous humor. Ulrich and Denissenko, but more especially the latter, gave very strong reasons for believing that the anterior chamber is only the outlet for the fluids which nourish the cornea, and which pass into it from the surrounding conjunctival and scleral vessels. Their surmises have been shown to be correct in an interesting experimental manner by both Ehring and Pflüger.

A Bacillus or a Fat-Crystal.—At a meeting of the Pathological Society at the Charity Hospital, New Orleans, November 21st, an important microscopic demonstration was made by Dr. H. D. Schmidt, President of the Society. Dr. Schmidt stated that beyond doubt the bacilli were fat-crystals. Dr. Schmidt succeeded in finding crystals, which were similar in appearance to bacilli discovered by Koch, and apparently the same. To determine their nature, Dr. Schmidt subjected the crystals to the action of boiling ether, when they disappeared, proving, as he claims, that they were not germs or organisms.

The Late Dr. Wm. H. Allen.—At a special meeting of the Board of Trustees of the New York College of Dentistry, the following preamble and resolutions were adopted:

Whereas, This Board has been called together to express by resolution and record their deep sorrow at the death of their late President, Dr. William H. Allen; and

Whereas, Dr. William H. Allen was one of the incorporators of the New York College of Dentistry, an active worker in its interests since its organization, and for the last seven years the President of the Board of Trustees, we, the members of this Board, express our appreciation of him as a co-worker and a man; therefore

Resolved, That the College deplores the loss of an honored President and an earnest promoter of her interests.

Resolved, That the Trustees are deprived of one who was a wise counsellor, a tried friend, and a true gentleman.

Resolved, That the profession which he honored has been robbed of one of her brightest ornaments, and that the community has lost a man of integrity, fidelity, and manliness.

Resolved, That we tender to his widow our sincere sympathy in her bereavement, and direct that a copy of these resolutions be sent to her; that they be spread upon the minutes of the Board, and that they be published in the *Dental Cosmos* and the New York Medical Record.

Faneuil D. Weisse, M.D.,
Frank Abbott, M.D.,
F. Le Roy Satterlee, M.D.,
Committee of the Board of Trustees

The Treatment of Strychnia-Poisoning. — Dr. W. J. Byrne, of Russelville, Ky., sends us the following: "I was called on the night of October 9th, at 10 P.M., to see Mr. W. E. C——, aged twenty-two, student of theology at Bethel College, in this place, who had taken strychniæ sulph. with suicidal intent. On arriving I learned that he had eaten but little supper; was supposed to have swallowed the drug about 9 P.M.; was found in a tetanic convulsion by one of his fellow boarders at 9.30. His condidition, when I saw him, was such as is produced by the action of the poison, the paroxysm being an-

nounced by a shudder passing through the entire frame, jerking and twitching of the head and extremities, and then suddenly a general tonic convulsion occurring. The paroxysms were then recurring every five minutes with a tendency to shorten the interval of relaxation. Drs. Alderson and Harper who had reached the boarding house before myself, had given the patient forty grains of pulv. ipecac a few moments previous to my arrival. We immediately began the inhalation of chloroform, which, while not warding off the convulsions, appeared to lessen their intensity. Finding it impossible to introduce any medicine by the mouth, we resorted to the use of hypodermic injections of the hydrate of chloral and bromide of potassium, fifteen grains of the former with thirty grains of the latter in aqueous solution. This, in connection with the inhalation of chloroform was continued till 12.30 at various intervals, during which time there was administered one hundred and fifty grains of chloral with three hundred grains of the bromide. During the same period of time he had hypodermically one grain of morph. sul. Under this course of treatment the paroxysms were apparently weakened, but the frequency was about the same. We then administered four drops of the fluid extract of physostigma, the inhalation of chloroform being continued, and for the first time he rested forty-five minutes before a recurrence. The convulsions not being so violent as before, we awaited the expiration of an hour before repeating the calibar bean ex., and this was succeeded by a rest of one hour, when the convulsions reappeared and the calibar ex. was again given. From this time on there was but little evidence of the action of the poison—some twitching of the facial muscles and jerking of the lower extremities. Having sufficiently recovered by 6 A.M. to swallow freely, we then gave the solution of chloral and bromide of potassium internally, at intervals of four hours, in the same doses as had been hypodermically administered. During the day he progressed well, and at the termination of thirty-six hours was well. I have thought the case of sufficient interest to give a synopsis, inasmuch as by weight he had taken ten grains of the ordinary commercial strychnia and yet was enabled to live by the antagonistic action, as I believe, of the chloral hydrate. The case also illustrates, in a beautiful manner, the paralyzing action of the physostigma."

TOTAL EXTIRPATION OF UTERUS FOR CARCINOMA.—Dr. W. C. Burke, Jr., of South Norwalk, Conn., on November 11th extirpated the entire uterus, by the vaginal method, for epithelioma involving entire cervix to internal os, but confined to uterine tissue. Up to the fourteenth day she has progressed favorably, and now has a very fair prospect of recovery, pulse and temperature being normal. Only once during entire case did the temperature reach 101⅗°, on the night of the fourth day, but remained there only for an hour.

HYDATID CYST OF THE LIVER.—Considering the rarity of ecchinococcus disease in the United States, the following note by Dr. W. S. Cheesman, of Auburn, N. Y., is of interest: "On admission to hospital, March 3, 1880, the patient, a woman, about forty years of age, stated that she had been quite well up to two weeks before, when she was seized with a sharp pain in the right side while at work. This pain radiated to the right shoulder, and was relieved by pressure. She vomited a greenish matter, and two or three days later she became jaundiced. Tenderness developed in the right side, the fæces became clay-colored, and the urine very dark. At the date of admission she was jaundiced and evidently in great pain; she suffered from nausea, and occasionally vomited. Marked tenderness was noted over the hepatic region, and at one point an unnatural fulness was detected, which was supposed to be the distended gall-bladder, though a little to the right of the normal position of that viscus. These phenomena were referred to impaction of a gall-stone. On the fifth day after admission peritonitis developed, and on the seventh the patient died. The autopsy revealed as the cause of death general peritonitis. Bile was found in the peritoneal cavity, and oozed through an ulceration in the bile-duct when the gall-bladder was squeezed. No gall-stone was found; perhaps it had escaped into the peritoneal cavity, and so eluded observation. The special interest of the case centred in a rounded tumor, about three inches in diameter, located in the liver just to the right of the gall-bladder. When opened it proved to be a hydatid cyst containing daughter and grand-daughter vesicles. Its fluid, turbid with pus, was shown by the microscope to contain great numbers of the hooklets of the echinococcus and the parasites themselves."

NEW ANÆSTHETICS.—Dr. V. Mering, at the recent meeting of German Naturalists and Physicians, reported his experiments with two new anæsthetics: diethylacetat and dimethylacetat. The former has a burning pungent taste, the latter a disagreeable taste and smell. Both produce narcosis very rapidly in frogs and rabbits. There is slowing of the heart-beat, and finally weakening of respiration. In inhalation they act much like chloroform. Mering gave the diethylacetat to some criminals and found that it acted very well, producing narcosis with no bad after-effects.

PRESCRIBING PROPRIETARY MEDICINES.—Dr. C. A. Lindsley argues in the *Therapeutic Gazette* against the prescription of proprietary medicines: "It is demoralizing to the profession because it is ruinous to scientific nomenclature, and renders a classification of medicines utterly impossible. What will the next generation of medical men know about Lactopeptine? Maltine? Vitalized-Phosphites? Celerina? Bromidia? Iodia? Petroleum Syrup? Soluble Phenole? Malto-coca? Hydroleine? Listerine? Caulocorea? Viburnum Compound, and a more innumerable host of mixtures? These are all of ephemeral existence, having no vitality other than what they derive from the advertising pages of medical journals and the newspapers. They are for the most part the inventions of tradesmen, and in no sense represent the growth and progress of medical science."

SIR THOMAS WATSON is reported to be losing strength.

THE THIRD CORPUSCLE OF THE BLOOD.—Mrs. Ernest Hart, in the *London Medical Record*, publishes a criticism upon Dr. Norris's work on the physiology of the blood. She claims that the "invisible corpuscle" described by him is really only a red corpuscle decolorized.

THE TARIFF COMMISSION'S REPORT ON QUININE.—A semi-official Associated Press dispatch announces that the commission in their report, which will be printed and indexed for the use of the Committee of Ways and Means, have outlined their action in the following words: "The reimposition of the duty on quinine will not be advised."

Original Communications.

A CASE OF MYXODÉMA,

With a Consideration of the Neurotic Origin of the Disease.[1]

By ALLAN McLANE HAMILTON, M.D.,

NEW YORK.

In the year 1873 Sir William Gull called attention to several curious medical cases, the histories of which he presented to the London Clinical Society. Two were reported in full, and five others were briefly analyzed, but all of them, however, were alike. Some of these identical cases have since been seen by various English writers, among them Ord.

The peculiar features of the disease, which Gull called "a cretinoid state supervening in adult life in women," consisted of more or less diffused swelling of the whole body, but marked in the face, and especially prominent in the lips, eyelids, and tongue.

This swelling had a doughy feel, and rarely pitted under pressure, and was not due to ordinary nephritic disease, because of the absence of albumen in the urine and other signs. In these cases the speech was slow, the hearing dull or lost, and the mental condition depressed or greatly changed. The bodily temperature was lowered, and peculiar trophic changes indicated the probable involvement of the sympathetic nervous system. The thyroid gland had disappeared entirely. The hair became changed in thickness, and the finger-ends were flat or clubbed. From the alteration in facial expression, the swelling, the mental obtuseness and thyroidal atrophy, Gull was inclined to consider the disorder as one closely allied to a form of imbecility long recognized as an endemic disease confined to Southern Europe, and known as cretinism.

Fagge, however, presented several cases of cretinism of English origin—well marked sporadic examples, in many respects resembling the adult cases presented by Ord.

In 1878 Dr. Ord brought forward five more cases, two of which he detailed, and also a carefully made autopsy, with clinical and microscopical examination. Interest having been excited in the curious malady, many investigators, in England chiefly, have since presented examples, so that nearly fifty cases have been brought forward, all of which, however, I do not believe to be examples of the disease described originally by Gull. Among the English observers are Inglis, Lunn, Cafavy, Mahomed, Heron, Lloyd, Hadden, Hopkins, and Gowan. In France, Morvan first described the disease as *cretinoid œdema*, and Charcot, Ballet, and Thaon, of Nice, as *cachexie pachydermique*. Olive, Bourneville, Blaise, Ridel-Saillard, Ollier, Merkelen, and Fiesinger presented cases in 1880-1881, and lately Sepelli has turned his attention to the disease in Italy.

In this country, so far as I know, but three cases have been reported—one by Dr. Hammond, one by Dr. Cushier, and another by Dr. Holland, of Louisville. This last case, sent to me by Dr. Preston Scott, of Louisville, was that reported by Dr. Holland, and must form the basis of the present paper. I have also under observation an incipient case, and I hear Dr. Ball has recently reported another to the New York Medical and Surgical Society.

It is probable that there are many others that have hitherto been looked upon as old cases of chronic nephritis, or as examples of cutaneous disease. I can remember several such that have puzzled me, and I do not believe my experience is unique.

The first of the two cases I have recently seen is a woman fifty-five years old. She is married, and has had seven children, and one miscarriage. Besides an attack of dysentery in 1852, she has never had any serious illness. Several members of her family have died of cardiac disease, and her father for a long time presented a swollen appearance, which probably resembled hers. Her menopause is over, and she menstruated for the last time one year ago. For some years, and notably when unwell, she has suffered from violent attacks of hemicrania.

About eighteen months ago her husband's attention was directed to a change in her general health. She became pale and her face appeared swollen. Her speech was affected and she expressed herself in a clumsy manner, and in words containing linguals her difficulty seemed greatest. She was indisposed to take exercise, and found it difficult to use her fingers in buttoning her dress or sewing. She had pains in her arms and legs, and suffered from gastric disorders. Her food was tasteless, and nauseated her. At times she had a profuse discharge of saliva from her mouth. She suffered from the cold, and found it necessary to wear thick clothes even in the warmest weather. She rarely perspired, and at the suggestion of her physician took a series of Turkish baths. Upon several occasions, when dressing after these baths, she noticed her body dotted with myriads of minute sudamina, which, when pressed, discharged a clear liquid, and were unattended by any inflammation or irritation, disappearing in a few hours.

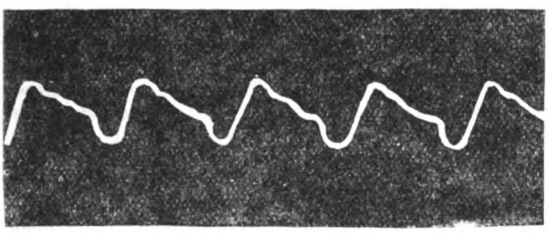
The pallor and swelling of the face attracted the attention of her friends and family, her nose becoming broad and flat, her lips thick and pale, and her eyelids decidedly full and puffed. Her legs and body were also enlarged, but there seemed to be no increase of swelling in the lower extremities toward the end of the day. Her hearing was impaired, and her temper easily ruffled. She was morose and depressed and disposed to seek solitude. Memory, too, became defective, especially in relation to recent events, and she has been unable to concentrate her attention. When shopping she has often forgotten her errand, and on one occasion has paid twice for the same article.

I first saw the patient on September 27, 1882. She was apparently an anæmic, badly nourished woman, and I was immediately struck by her extraordinary appearance and peculiar voice. The swelling just described was observable in the face. The cheeks, lips, loose tissue about the eyes, nose, and forehead were swollen and gave a doughy, tough feel to the finger. The tongue even was large, but not indented at its edges. The swelling, I found afterward, extended all, but not equally, over the body, and the ankles were enlarged. Very firm and prolonged pressure over the tibiæ produced moderate pitting, but with quick return to the general elevation, and there was nothing at all like the pitting in renal disease. Her fingers were broad at the ends, or clubbed, the right, perhaps, being more deformed than the left. Her color was like that of old white wax, and in places where the swelling

[1] Read before the New York Academy of Medicine, December 7, 1882.

was not so great it was crackly and rough, but withal shiny, like the surface of morocco. Local stimulation produced little reaction and no reddening. Her hair is thin and dark, and there is no staining of the skin, so often met with in trophic disorders. The thyroid gland has almost completely disappeared, her temperature is decidedly lowered, and this is unilateral. In the mouth it is 97.2°, in the left axilla 97°, while in a corresponding part on the other side of the body it is but 96°. Trials also made by Dr. Holland showed unilateral lowering. She has subjective areas of coolness over the arms, back, and thighs, and her feet are usually cold.

The pulse has been small, and averages about sixty. The sphygmographic tracings I took indicated, upon several occasions, a condition of increased arterial tension; but no heart-lesions ex-



isted, so far as I could judge. She has suffered from flushes and palpitation.

The numbness spoken of is more persistent in the hands than feet, and is very decided in the two outer fingers of each hand; and in addition to this there has, for some months, been formication in both hands. One of the peculiar features of her case is the disturbance in the sense of taste. She perceives very often disagreeable metallic tastes, and by actual tests I found decided impairment. Her hearing is diminished upon the right side, and she can only hear the watch at six inches. Her vision is impaired likewise, and the right eye suffers more than the left. The disorders of motility in the patient's case are conspicuous. Dr. Holland was unable, some months ago, to find ataxia, and so far as diminished co-ordinating power of the upper extremities is concerned, I agree with him. The patient, however, cannot stand steadily with her eyes closed, and when she walks her gait is something like that of the general paretic. She is very clumsy at times, but the awkwardness seems to wear off to some degree as she moves about.

The tendon-reflex is decidedly exaggerated on both sides. Electro-muscular contractility is diminished, especially on the left side. Galvanic reaction is better on the right side than the left.

Her speech is slow, thick, and hesitating, and there is the occasional elision of a syllable. There are no material ocular changes, and the pupils contract normally.

There is a certain slowness in expressing her ideas, and in the past there have been the indications of mental failure already spoken of.

Examination of the urine upon several occasions failed to show the presence of albumen. The specific gravity of this fluid was 1022, and it contained earthy phosphates and an appreciable amount of sugar. No casts were found. She passes from one to two pints in twenty-four hours. No treatment has helped her in the least.

In this patient's case, the degree of œdema was not everywhere constant, although certain regions were always more or less swollen. At these times, however, no urinary change was found. Certain parts, such as the face, always remained enlarged.

The constancy of individual symptoms dignifies the disease as well established; and I do not think we should regard it, with Mahomed, as simply an irregular form of Bright's disease—although, in many cases, albuminuria occurs at a late date, and in several of the cases this has been the apparent mode of death. We should, I think, draw the line sharply between the examples with albuminous urine, and those without. Many so-called cases of myxodema are clearly not examples at all, and these we shall leave entirely out of the question. In all the true cases there has been more or less constant swelling of the face, even when no mention has been made of enlargement of the legs—a fact inconsistent with the anasarca of renal disease. The lips seem to be involved nearly always, and so is the tongue. In one of Gull's cases, the swelling was so great that the patient could not wear false teeth. The urine in this disease has, as a rule, been of low specific gravity, averaging about 1016. No albumen has been found in the early stages. In one of Lunn's cases, however, a trace of albumen has been found from time to time, but this is unusual. In the fatal cases, and, in fact, in the later stages of the twenty-seven cases collected by Mahomed, albumen has been discovered; but this is rather a result than an evidence of original renal trouble.

The proportion of urea is always diminished, and this fact was first pointed out by Ord. In one of Lunn's cases, the patient passed from 34 to 38 ounces of urine daily, averaging 5.72 grains of urea per ounce, which is equal to 194.48 grains in twenty-four hours. In Hadden's case 196 grains were passed in twenty-four hours. This was a notable diminution when we know that the normal quantity is from 450 to 500 grains per diem. No sugar has been found except in one of my cases.

The temperature in myxodema is notably lowered and there is great subjective suffering from cold, although changes in temperature do not affect the patient as disagreeably as it might be supposed they would. In Morvan's fifteen cases, however, the patients felt worse in winter. The deep temperature may be reduced from two to three degrees.

In one of Inglis' cases the axillary temperature was only 95°, while in many others it rarely exceeded 96° at any time. A peculiarity of the temperature change is its unilateral character. In nearly all of the true cases there is this difference of at least one degree between the two sides of the body, usually, however, in favor of the right side. In one of Duckworth's cases the right axillary temperature was 99.4°, the left, 97.2°.

The surface temperature is also lowered. In Ord's fatal case the temperature below the right mamma was 94.9°, and below the left, 95°.

No repeated records of temperature have been been made, so far as I am aware, except in Hadden's cases. In one of these cases seventy-one observations were taken. The temperature reached the normal point only sixteen times. It was never above 98.6°; upon nineteen occasions it fell below 97°.

In one of his patients it fell to 94° a day or so before death, and remained at that point until the patient died.

In Ord's fatal case the temperature fell frequently to 95°, and never exceeded 97.6°. It reached 99° just before death. In my own cases the same unilateral difference existed, but in the second patient there

was chronic mania, and the unilateral change was elevation, the left axillary temperature always exceeding the right.

The circulation undergoes changes, the arterial tension being, as a rule, increased. There is usually some difficulty in obtaining sphygmographic tracings, owing to the toughness of the skin. The tracings taken in my first case were extremely interesting, and showed in every instance a short first stroke and a wavy, long diastolic line, with tremulous valvular indentations. In Hopkins' case there was slight roughness with the first sound at the base, and reduplication of the first sound at the apex. As a rule, however, there are no heart-lesions. The pulse is usually feeble and slow, though slight muscular exercise causes an immediate increase. The patients are always anæmic, and the red-corpuscles are decreased in size and number. Seguin, who made some measurements, found only a slight reduction in the number, but a great reduction in the size of the corpuscles.

There is great difference of opinion in regard to the mental condition of patients with myxodema. All observers admit that there is dulness and stupidity; and some have described a much more pronounced condition of affairs.

The peculiar mental state of the cretin is a sluggish action of the mind and a slowness in expressing ideas, which are tardily formed. This may vary greatly from hesitation to utter stupidity. With this there are very conspicuous physical defects closely allied to the appearance presented in the adult cases I have referred to, though usually more marked. This resemblance led Gull to apply the word cretinoid to the disease. There is, I have noticed, a great lack of concentration, a forgetfulness of small duties, and a dulness of perception. The mental trouble usually precedes the swelling and other symptoms, though it is sometimes masked and unrecognized.

In some of the cases, Cafavy's among the number, melancholia preceded the actual manifestations of other kinds. In Morvan's and Duckworth's cases hallucinations are referred to, and a variety of minor changes varying from irritability of temper to actual mania are present. Bad dreams, and disturbed sleep are mentioned by several writers. Hallucinations seem to be very common, and indicate not only an erethism of the perceptive centres, but a state of excitement of the organs of special sense.

The trophic changes consist of alteration in the texture and color of the skin, bronzing, acquired moles, changes in perspiration, loss of hair, and thyroidal atrophy. The latter symptom is very common, and in Ord's cases especially was it apparent. In most of the cases deposits of fat were found to have taken the place of the atrophied thyroid. In these cases as well as the infantile cretins of Fagge a supra-clavicular deposit of fat was found to have taken place. This I noticed in my first patient. In Duckworth's second case the thyroid was apparently unaffected.

Various other interesting changes in the texture of the skin and its appendage have been found. Hadden observed brittleness of the nails, and other investigators have noticed changes in their thickness and configuration. In one of Duckworth's cases the face, shoulder, and scalp presented acquired moles, and he had seen the same thing in eight or nine other cases. In Gowan's case there were numerous brown, warty growths. The thinness of the hair has attracted the notice of several observers who have reported examples. In both my patients this was the result of the disease, and in Charcot's case not only the hair but the teeth fell out. Lunn has noticed falling out of the hair not only from the head, but from the pubis and axilla, and in Gowan's case the hair disappeared in great part from the head and axillæ. Inglis has found warty growths upon the hands. These and other like defects seem to have been present in the majority of reported cases.

There has been observed in most of the cases a peculiar clubbing of the ends of the fingers. In the cases of Gull, Ord, Duckworth, Inglis, and the French writers, as well as one of my own, the finger-tips were conspicuously broad and patulous. To this appearance Ord and others have applied the term "spade-like."

Myxodema is attended by a real loss of muscular power, and not by a feebleness which results from the bodily enlargement, as has been held. It is true that in Thaon's case and others the circumference of the thighs and legs was immense, and the patient could only move slowly, advancing sideways, and with difficulty placing one foot before the other; but such a deformity is unusual. There is always motor enfeeblement, which is general and grave, and is shown in both upper and lower extremities. Inglis has found in one of his cases that the hand-grasp was very weak; and in many cases the women were unable to use their needles, button their clothes, write, or execute delicate movements. In all that have been tested by electricity there has been diminished peripheral excitability and the galvanic reaction has been normal.

Ballet's patient could not take twenty steps without resting, and one of my own was obliged to ride whenever possible. This feebleness seems to be of a peculiar nature. Charcot and Morvan's cases could make great efforts with ease, lift heavy weights, and walk long distances, but in minor acts they were powerless. One of Morvan's cases could lift a heavy weight, but actually had not enough strength in her fingers to crush a flea when told to do so. This would indicate something closely allied to incoordination, or perhaps volitional enfeeblement. The gait is always peculiar, and has been compared to the waddling of a duck.

The voice of the myxodematous patient has been spoken of as nasal, guttural, hesitating, muffled, or thick. Sepelli says, "The movements of the tongue are slow, and the words succeed each other sleepily; the tone of voice is monotonous, harsh, and has a nasal timbre"—the latter he believes to be due to the infiltration of the pharynx. I do not agree with this explanation entirely, and think the slowness is psychical and the embarrassment of the tongue ataxic. I have heard the same phonation in other diseases, notably in Parkinson's disease and general paresis. In an advanced case reported by Ord the difficulty of speaking was curious. "In speaking she commenced by closing her lips and swallowing; her voice was nasal, with defective intonation; and while articulating she often made a partial act of swallowing and ejected air by the nose."

Morvan found paresis and relaxation of the vocal cords, but no infiltration or œdema.

So far as ocular symptoms are concerned, nothing distinctive has been found. In a few of the cases there is some failure of accommodation, but nothing else. No retinal hemorrhages were found, which are so common in certain varieties of renal disease. In Morvan's cases amblyopia and hemiopia is reported, and in Hammond's double optic neuritis.

One of the striking features of the disease is the

deafness which comes on usually at an early period. It is sometimes, in fact frequently, unilateral, and the right ear is more often affected. There seems to be not only a dulness of auditory perception, but there is an actual local loss of function of the apparatus of hearing, the watch test and tuning-fork showing this to be the case. In the late stage respiration is often embarrassed, and probably by pulmonary œdema, as well as central causes.

Smell and taste are often lost or greatly interfered with. In Hopkins' case the sense of smell was so far gone that the patient could not even detect the odor of a wallflower.

In several cases, notably those of Ballet, Hopkins, Gowan, and one of my own, there was a free and abundant secretion of saliva, and it escaped from the mouth in large quantities. This is sometimes associated with hemicrania or with facial anæsthesia. In six of Morvan's cases there was at times a copious discharge of a watery secretion from the nose.

The disease, so far as I know, has, with very few exceptions, been confined to adult women who have passed the menopause. The male instances are rare, and the number of young female patients is very small. Two of Hadden's cases were women under forty. The ages of the majority of subjects range from fifty to seventy, and in every instance there is a history of great fecundity. Few of them have borne less than five children, and most of them eight or ten, and a number of miscarriages in addition are usually spoken of. Ballet's patient was a woman of fifty-seven, who had had seven children. One of Cafavy's cases had six children and four miscarriages, the other five in eleven years. One of Duckworth's patients had had nine children. Semon's patient had had frequent pregnancies and seven miscarriages. Taylor's patient, a woman of thirty-nine, had had eight children. One of my patients has had seven children and one miscarriage. This feature of the etiology is of great interest, and suggests that a constant tax upon the sympathetic nervous system may have had much to do with the development of the disease. In fact Mercer noticed this in Ord's cases. As I have said, the male cases are few. One of Inglis' patients, who presented a clear picture of myxodema, was a man, but Heron's case is exceedingly doubtful.

Several cases among young people have been presented, but it is very questionable whether these cases were not examples of pure cretinism, as were those of Fagge. Rösch reports the case of a boy seventeen years old, while Bourneville and Ollier have presented two cases in young men twenty and twenty-one years old. Morvan says he has seen the disease in a boy ten years old. Charpentier reports the case of a child four years old who was born apparently healthy. There was remote insane family history, but the children's parents were both healthy. At the age of five months the myxodematous symptoms appeared and she has gradually become swollen and stupid, and has manifested all the symptoms of myxodema. There was everything to militate against the diagnosis of cretinism, her head and ears being well-shaped, and there was no goitrous trouble in the family. In this case convulsions complicated the disease.

As to the other etiological factors not much is to be said. In some cases melancholia is said to have preceded the myxodema, but whether this is a symptom of the developing disease or an actual predisposing condition it is difficult to state. In several cases a neurotic hereditary taint is referred to, while in one I am not sure that the disease had not affected the father of the patient.

In some cases a history of antecedent chronic gastric disturbance is given. Morvan, who claims to have been the first to recognize the disease, believes that prolonged lactation has much to do with its origin. Menorrhagia and uterine disease is mentioned by others, while by many observers reverses of fortune and mental worry are mentioned as causes. In Thaon's case the disease is supposed to have been caused by climatic changes.

A consideration of the pathology of myxodema opens up to us a most attractive field of study, and furnishes interesting facts that must have a bearing upon our present imperfect knowledge of many puzzling trophic maladies.

Gull looked upon the disease as a form of adult cretinism, and there can be no doubt that in many respects these two diseases resemble each other, though Charcot is not disposed to consider them as identical.

Ord believed in the peripheral origin of the affection, considering the central symptoms as secondary. He found in one of his cases in which there had been a post-mortem examination a deposit of mucin in the skin itself, and therefore thought that the central nervous troubles were simply of an asthenic order and due to a diminution of the reflex tonus of the skin, the nerve termini being insulated by the encroachment of myxœis. The peripheral involvement of the cutaneous nerves and the presence of mucin is supposed by several observers to account for the anæsthesia which often exists, the tactile blunting that is frequently found, and the various defects of taste, and subjective coldness. Ord refers to Becquerel's classical experiments, in which he coated animals with varnish, to show the disturbance of the nervous system that follows an abolition of function of a large part of the cutaneous surface. Thaon, of Nice, in discussing Ord's views, very properly shows that in anæsthetic leprosy and other disorders there is necessarily no cerebral disorder, such as might be inferred.

The conspicuous symptoms of myxodema lead us to the conclusion, I think, that the nervous system is primarily at fault. Not only do we reach this conclusion by a realization of the existence of trophic changes of a pronounced sort, and by bulbar symptoms, but by the recognition of the unilateral expression of neural symptoms, which are so common. Savage, Hammond, and Hadden believe in the central origin of the disease, and Cushier, in a recent paper, has found appearances in the spinal cord which lead her to class the disease with such affections as pseudo-hypertrophic paralysis and progressive muscular atrophy. Other observers hold different theories, and Henrot thinks that the essential lesion is in the pineal gland.

The most acceptable theory of the origin of myxodema is that of Hadden, who holds that there is a condition of angio-spasm in this disease in contradistinction to the vaso-motor paresis which exists in exophthalmic goitre; that the deposit of mucin depends upon lymphatic obstruction; that the mental symptoms were due to the condition of the brain itself, and are subsequent to the lesion of the sympathetic system, which is primary and *peripheral*.

The existence of a continued angio-spasm is, I think, opposed to all advanced physiological laws, and, to some extent, destroys the value of his otherwise reasonable theory. Dr. Cushier has found cell-degeneration in the giant-cells of the anterior horns

as well as of the gray matter of the posterior columns. No examination has yet been made of the sympathetic ganglia, and none, so far as I am aware, of the brain, medulla, or cervical cord—at least, no microscopical examination. I believe, however, that when such an investigation is made, there will be found lesions of importance. The early appearance of bulbar symptoms and mental disturbances are, in my mind, suggestive indications that the seat of the disease *originates* in the higher centre, and not in the cord.

The existence of a principal medullary vaso-motor centre has been determined by a variety of observers. Dittmar has found it to be situated in the lateral columnar tract of the formatio reticularis, between the copora quadrigemina and calamus scriptorius. This point when irritated results in contraction of the vessels and lowering of the general temperature. Whatever offices the lower centre in the cord may have, it cannot be denied from the experiments of Goltz and others that they are all controlled by this superior medullary centre. The reduction of temperature in the cases of myxodema, which is usually unilateral, and is very constant, points very strongly to a lesion above the pyramids for its production. Then, too, if we consider for a moment, it will be found that there are various well-defined disturbances which may be referred to deep lesions in nerves that take their origin very near this part of the bulb. The copious escape of saliva with defective sense of taste, the facial anæsthesia, sometimes found, and the escape of nasal fluids, are undoubtedly due to a disturbance of function of the trigeminus. It may be reasonably inferred that the nuclei of the trigeminus and hypoglossus are involved in typical cases, and as one result we find in the tongne the motor defects which are manifested in the peculiar ataxic articulation. The loss of hearing, which is also frequently unilateral, has as well pathological significance. The experiments of Claude Bernard, which proved that irritation of certain parts of the floor of the fourth ventricle produces glycosuria, also suggest a local origin, for in my case, besides bulbar symptoms, there was sugar in the urine.

An irritation of the medulla, which would cause profuse salivation has been found by Gruetzner to produce as well irritation of the sympathetic, manifested by other than local expressions. I mention this fact because I believe a tissue change may exist and be limited to the medulla, and still produce a general disorder of the trophic centres. The symptoms of general paresis (many of which depend upon irritation of the sympathetic system), and resemble those found in myxodema, are probably due at first to local trouble at the floor of the fourth ventricle as described by Magnan. Much of the mental disturbance in paresis arises from varying vascular alterations in the beginning, rather than coarse organic changes, though there can be no doubt as to the condition of the brain in the established disease. In myxodema the mental symptoms are varying, and of vascular causation.

I am inclined to believe that the cutaneous trophic changes are due, in the main, to subsequent disturbance in the lateral and posterior columns of the spinal cord. In cases of mixed postero-lateral myelitis the tendon-reflex is usually increased, as it was in my case, and when the numerous pathological contributions of Charcot are investigated, we must adopt the theory which has been accepted by Schiff and others, that the sensory nerves are those in which trophic fibres go to the skin. In myxodema it is not unusual to find cutaneous anæsthesia, and deep pains are occasionally mentioned.

The significant experiments lately made by Raynaud and Arthaud show that in certain cases of posterior spinal sclerosis, attended by trophic cutaneous defects, there is degeneration of the spinal sympathetic ganglia, with disappearance of Remak's fibres, and destruction of the nerve-cells.

However, so far as we know, the production of cutaneous change is very obscure. There is a close connection between pigment alteration, thyroidal enlargement or atrophy, and mental disturbance. It has been proved, I think, not only by Gull and Curling, but by many others, that this disease bears some relation to exophthalmic goitre, being a sort of antithesis, there being atrophy of the thyroid instead of enlargement.

I have pointed out the coexistence of mental impairment with thyroidal and various cutaneous changes in a paper upon the hairy growths of the insane. Goitre is often attended by trophic derangements of the skin and its appendages, and I have repeatedly found in association various curious phases of mental disturbance, notably melancholia, hypochondriasis, and sometimes mania.

In all the carefully reported cases of myxodema there are striking nutritive changes indicative of a pathological upheaval of the sympathetic nervous system—alteration of color and texture of the hair or falling out, brittleness of the nails or deposits of pigment. Duckworth has noticed the coexistence of molluscum fibrosum with mental disease, and other writers, especially Charcot and Weir Mitchell, have repeatedly in their writings dwelt upon the significance of moles, clubbed fingers, and hair changes.

Geneau de Mussy found increased pigment deposit, and cutaneous changes with medullary irritation of the vagus nuclei, and Mobius has pointed out lesions of the medulla in connection with exophthalmic goitre.

The occasional existence of amblyopia, of double optic neuritus (Hammond's case), the lost sense of taste and smell, vertigo, impaired sense of localization, and other special neurotic defects denote a limited localization.

Whatever the peripheral process is that leads to the formation of mucin in the tissues it is difficult to say. Ord has satisfactorily proved the nature of the deposit, and Hadden is disposed to believe the initial process to be a lymphatic obstruction, the accumulated products being afterward converted into mucin. It is very probable that this peripheral alteration which is always a feature, and connected with diminished or absent perspiration, is the cause of the albuminuria, which is so often found in the *late* stage of the malady—the excretory function of the skin being suspended and the kidneys being obliged to perform double duty.

The diminished excretion of urea is probably due to the apathetic condition of the patient, who rarely uses his muscles, except when he is obliged to. In this respect the condition has been compared to that of a cold-blooded animal.

I removed a piece of skin from the leg of my patient. Under a low power (×200) a specimen stained with hæmatoxylon showed great increase in fibrous tissue, and general evidence of a low inflammatory process. Groups of nuclei were found here and there—more toward the superficial layers, and the rete mucosum was at its lower border

fringed by a row of deeply stained cells. The vessels were all thickened and enlarged, and evidences of infiltration were shown. Though several sweat-glands were seen, there was not one with a duct which extended unbroken to the surface. The gland itself was surrounded by a space which had evidently been filled with some clear substance.

FIG. 1.—Open space which probably contained mucin.

At several points large gaps were filled, the edges of which were dotted with the same small round cells.

Under a higher power (× 500), the cut ends of the vessels were found to be greatly thickened, and when a group of these arterial openings were found it was easy to trace the course of thickened bundles of

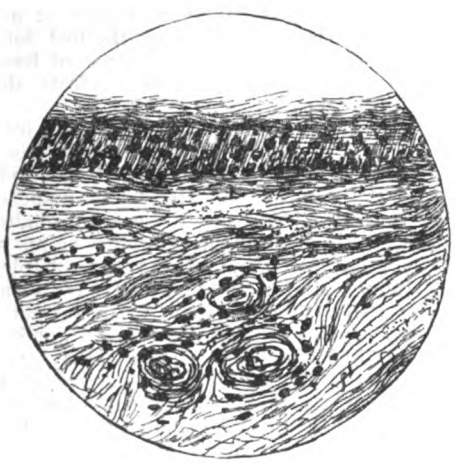


FIG. 2.—Vessels with thickened walls, and surrounded by exudation products.

connective-tissue which passed about them. Groups of exudation corpuscles were found about the vessels. No apparent nervous degeneration was to be discovered.

Mercer has examined specimens of the uvula and tongue from one of Ord's patients, and the same nuclear proliferation and vessel-thickening was found.

Post-mortem examinations have not been numerous, and carefully recorded ones are very rare.

Ord's autopsy was the first, but no microscopical examination of the nervous-tissues was made. The vessels of the brain were found to be generally atheromatous, *especially at the base*, the kidneys were found to have undergone vascular alteration, and were "minutely granular," the lungs were emphysematous, and the heart was affected. One case is reported in the *St. Thomas's Hospital Reports*. On autopsy, the kidneys were found to be sublobulated, elongated, and abnormally firm. The brain was anæmic, but healthy. The thyroid body had disappeared, and its place was occupied by two little fatty masses.

Of Morvan's fifteen patients, several of whom died, there is no record of a carefully made autopsy. In fact, with the exception of Dr. Cushier, no one has made any special examination, so far, of the nervous system.

It is hardly possible to confound myxodema with any other condition—scleredema or icthyosis. In the former there is a hardness and limited invasion, and a toughness that does not belong to myxodema. The latter disease cannot possibly be mistaken. In neither of these skin diseases are there mental or speech defects.

As to the possible confusion with renal disease, there is much to be said if we are disposed to bring a number of irregular cases of nephritis under this head. True myxodema should include only cases with tough or doughy swelling, mental degeneration, speech defects, thyroidal atrophy, deafness, and constant lowered temperature. In the latter respect unilateral lowering is of great diagnostic significance, as has been already shown.

The prognosis of myxodema is usually bad, and but one case, so far as I know, has been cured, that of Ballet. The probable origin of the disease in itself is sufficient to place it in the long list of progressive degenerative and fatal disorders of the nervous system. Its course is a comparatively long one. Morvan's longest case had lasted twenty-seven years, and he reports others of long standing. Thaon's patient had suffered for eight years. In one of Duckworth's cases the disease had lasted four years. In my own cases the disease had lasted a comparatively short time.

The *treatment* of myxodema has been attended by very unsatisfactory results. Ballet reports a case, also observed by Charcot, in which the milk treatment was followed by decided amelioration in the symptoms, the skin becoming more supple, the swelling subsiding, and this was in a patient who had suffered for many years and had well-developed symptoms. Thaon refers to the improvement of his patient as the result of a residence at Nice and Aix, but when she went to a cold climate all the symptoms were increased.

In a discussion before the Clinical Society, Cafavy recommended sulphur baths, which had been used by Thaon. Dr. Bennet had seen good results follow the use of iodide of potassium, but it would appear that Bennet's patient had had syphilis, and was probably a questionable case. Taylor treated one of his patients with jaborandi, but without success.

A form of treatment, which so far has done good, consists in the use of either nitrite of amyl, as suggested by Hadden, or nitro-glycerine. The latter drug has been used in several cases with much benefit. In one of my cases it was administered in

doses of one-fiftieth of a drop and has really done some good.

To recapitulate: 1. Myxodema is a disease of adult life, chiefly in women. It is allied to cretinism and is slowly progressive; it is attended by the gradual and uneven deposit of mucin in the skin itself, by various trophic skin changes, by unilateral lowering of temperature, mental impairment, increased arterial tension, deafness, and ataxic speech defects. 2. It bears a significant relation to frequent pregnancies and the menopause. 3. It probably depends upon a lesion primarily of the bulb, with secondary extension to the postero-lateral columns of the spinal cord and the spinal sympathetic ganglia. 4. Cases with muscular atrophy and deep tissue-changes are rare, and when so found probably indicate degeneration of the multipolar cells in the anterior horns. 5. Renal disease is not the cause of the malady, but the result.

BIBLIOGRAPHY.

Rösch: Untersuchungen über den Kretinismus in Wurtemburg Erlangen, pp. 179, 183. 1844.
Curling: Medico-Chirurgical Transactions, vol. xxxiii., p. 303.
Fagge: Medico-Chirurgical Transactions, vol. liv., p. 159.
Gull: On a Cretinoid State Supervening in Adult Life in Women (Transactions of the Clinical Society of London, vol. vii., 1873).
Ord: Medico-Chirurgical Transactions, vol. lxi.
Ord: British Medical Journal, May, 1878.
Olive: Archives Gén. de Méd., June, 1879.
Savage: Journal of Mental Science, January, 1880.
Thaon: Revue Mensuelle de Méd. et de Chirurgie, August, 1880.
Goodhart: Medical Times and Gazette, May 1, 1880.
Hadden: Le Progrès Méd., Nos. 30 and 31, 1880.
Inglis: Lancet, Sept. 25, p. 605, 1880.
Ballet: Progrès Méd., No. 30, 1880.
Bourneville and Olfier: Progrès Méd., No. 35, 1880.
Lloyd: British Medical Journal, January 22, 1881.
Hopkins: Lancet, December 10, 1881.
Mahomed: Lancet. December 24, 1881.
Charcot: Gaz. des Hôpitaux, No. 10, 1881.
Hammond: Neurological Contributions, 1881.
Mercer: N. Y. MEDICAL RECORD, April 16, 1881.
Ridel-Saillard: Thése No. 218, 1881.
Cafavy: British Medical Journal, December 24, 1881.
Morvan: Gaz. Hebdom., August 26 and September 6, 9, 16, 1881.
Fiesinger: Revue Méd. de l'Est, p. 301, 1881.
Lunn: British Medical Journal, December 24, 1881.
Heron: Medical Times and Gazette, January, 1882.
Henrot: Proceedings of French Society for the Advancement of Science (trans. in N. Y. MEDICAL RECORD, October 14, 1882).
Charpentier: Le Progrès Méd., February 4, 1882.
Sepelli: Revista Sperimentale di Freniatria e di Med. leg., i and ii., 1882.
Semon: Trans. Clin. Soc. of London, 1881.
Blaise: Archiv. de Neurologie, Nos. 7 and 8, 1882.
Hadden: Brain, July, 1882.
Holland: American Practitioner, September, 1882.
Cushier: N. Y. MEDICAL RECORD, August 19, 1882, and Archives of Medicine, December, 1882.

POPULUS is the last new and perfect substitute for quinine. It is also claimed to be a powerful antiseptic.

LOCOMOTOR ATAXIA COMPLICATED BY ACUTE CARDIAC DISEASE.[1]

BY LEONARD WEBER, M.D.

NEW YORK.

IN a paper published in the *Montpellier Médical*, for June, 1880, Dr. Grasset records certain facts tending to establish a causal relationship between typical locomotor ataxia and certain cardiac lesions. He relates two cases of disease of the aortic valves developing in the course of locomotor ataxia, and fifteen other instances, collected from various sources, in which locomotor ataxia and valvular lesions were found to be associated.

In the *Berliner klin. Woch.*, for July 7, 1879, Drs. Berger and Rosenbach, of Breslau, have reported seven cases of tabes, coupled with incompetency of the valves of the aorta. Four of these occurred in females, and three in males. The patients were from thirty-five to fifty-five years of age. It is to be regretted, however, that they were unable to determine, in any of their cases, which of the two diseases was first developed

In the works of standard authors on neuro-pathology, I have not found any observations bearing on the subject in question. With regard to the circulatory apparatus in locomotor ataxia, it may be mentioned that Eulenburg has taken sphygmographic tracings in a number of cases, and has found diminished tension of the pulse. Charcot states that, in the great majority of cases of tabes, the frequency of the pulse is increased to 90 or 100, or even more beats per minute.

I will now give the history of the case that has come under my observation:

H. F——, aged forty-five; German; married; merchant. First consulted me in February, 1879. He is a tall but thin man, of pale yet not cachectic appearance, and of a very nervous temperament. Family history good; no neurotic taint. He acknowledges having had sexual intercourse freely in his early manhood. He does not at present complain of any weakness as regards his sexual powers; but he feels rather exhausted and has pain at the back of the head on the day after coition. He also perspires freely soon after the act, and is altogether given to much freer perspiration after muscular exertion or mental excitement than formerly. Has had neither syphilis, inflammatory rheumatism, nor other severe illness. His children appear to be strong and healthy.

He finds it difficult, of late, to properly attend to his business, which is laborious in so far, that for many years he has been in the habit of buying and shipping large quantities of goods. This circumstance compels him to be on his feet, more or less, all day long, in order to make the necessary selections. For the past two years he has been troubled by fulgurating pains, more severe in the lower than the upper extremities, and associated with articular dolors. But they never have been severe enough to confine him to his bed for any length of time.

His sleep has been bad for some time, and he has of late been much more irritable and excitable than formerly. Appetite good, bowels fairly regular. No paræsthesia, nor paresis of rectum, bladder, or urethra. No vesical catarrh. Recently, in taking his meals, he has noticed that, the morsels of food

[1] Read before the Section on Practice, New York Academy of Medicine, November 21, 1882.

will not glide down the œsophagus as readily as formerly, and that he has to make a decided effort to get them down. This symptom of dysphagia I have noticed, in common with other observers, pretty regularly among the earlier signs of locomotor ataxia. In the physical examination of the patient, I found no evidence of visceral disease, but noticed a pulse of ninety beats per minute. Complete absence of left patellar tendon-reflex, and great diminution of right were also noticeable. When his eyes are closed, the patient cannot stand without swaying to and fro. Nor can he stand or hop about on one leg, although he does it a little better with the right than with the left leg. His gait is not ataxic, and he has no numbness of his feet. There is, however, a good deal of paræsthesia of the lower extremities. The coarse muscular power is fairly good; but all continued muscular efforts soon tire him. Writing also. There is well-marked myosis, no reaction of pupils to light. An ophthalmological examination, made by Dr. Knapp, corroborated the fact of the presence of the Robertson pupil, but failed to disclose any retinal changes. *Diagnosis:* Disease of the posterior columns of the cord, slowly ascending. *Treatment:* Extract. physostigmat., one-tenth grain, four times daily; evening dose of brom. sod. with pepsin and hydrobromic acid; half-bath of about 80° and of two minutes' duration, to be taken in the morning, three times in the week. Galvanic current to spine, also three times a week. Restriction as to sexual intercourse and general regime. The application of electricity was found not to agree with the patient. It irritated and excited him, and was consequently discontinued. The half-baths taken as described above were introduced and systematically used in locomotor ataxia by the late Dr. Runge, Physician-in-Chief of the Hydropathic Institute at Nassau, Germany. In his treatise on hydrotherapeutics, he recommends them very highly in the treatment of this disease. I may be permitted to say in this connection, that, in the present case, as well as in several similar ones, and likewise in a number of instances of spinal neurasthenia, I have been much pleased with their beneficial effects.

The above treatment was continued until May 15th, with little interruption, when small doses of ergot and belladonna were substituted for the physostigma, in order to reduce the hyperidrosis, which was a source of great annoyance to Mr. F——. Later on, the patient went into the country, continuing there the baths in the shape of a daily sponge-bath, but taking no medicine. I saw no more of him until December, when he reported himself worse again, in consequence of overwork. The right patellar tendon-reflex had now also disappeared. In other respects the patient was *in statu quo*. He was again put on the physostigma powders and half-baths. This treatment was kept up for three months. His sleep had meantime become sufficiently good to dispense with the bromides. In the summer of 1880 he went with his family to the White Mountains, where he was taken, in the night of August 1st, with acute and severe symptoms concerning the heart and lungs, which confined him to his bed for two weeks. He next went to Saratoga, where he had another attack of orthopnœa, occurring at night. I saw him again in the city in the night of September 5th. He was then suffering from an attack of severe orthopnœa, coughing violently, and expectorating a good deal of frothy mucus of a pinkish color. Râles could be heard all over the chest, as if he were going to have acute œdema of the lungs. His heart beat very fast and pericardial *frémissement* and friction-sound were unmistakably present. The systolic sound was somewhat muffled at the apex. I was informed that this paroxysm had come on immediately after sexual intercourse, and that the previous ones at the White Mountains and Saratoga had occurred in much the same manner and had apparently been brought about by the same cause. I gave him a few drops of veratrum and stayed with him an hour, when he ceased coughing and fell asleep.

A careful examination, made on the following day, confirmed the diagnosis of pericarditis, and probable endocarditis. But I failed to discover in the etiology anything except the probable influence of the sexual act, which he had been again indulging in more freely while in the country. The patient was kept quiet, and a blister applied over the heart. On September 19th he had another attack of orthopnœa, less severe, again following sexual intercourse. September 24th, I noticed that the fifth intercostal space retroceded at the heart's systole. A friction-sound was no longer audible. October 2d, I heard for the first time a systolic mitral murmur, associated with accentuation of the second sound of the pulmonary artery. This made it pretty certain that endocarditis as well as pericarditis had attacked the patient at the same time. The indulgence of sexual intercourse probably furnished the immediate cause of the development of the cardiac disease, while for the remote cause we would have to look to the spinal affection and its weakening influence upon the circulatory system, as explained by Charcot and Eulenburg, and particularly marked in this case. He was ordered tonics and small doses of digitalis, which he continued more or less during the winter of 1880–81. Sexual intercourse he was forbidden. The murmur remained the same, but the ataxia did not progress. He was able to attend to business in a moderate way, and had no further attack of orthopnœa until February 20, 1881. This attack occurred again at night, but the immediate cause was not known—perhaps not acknowledged.

In March, 1881, he had a pretty severe attack of lumbar neuralgia, requiring morphine injections.

He now prepared to go to Europe. Before sailing he consulted Dr. Alonzo Clarke, who also pronounced his cardiac trouble to be mitral. The summer of 1881 he spent at Nauheim, in Germany, an indifferent thermal bath and popular summer resort for ataxic patients. The following winter he spent at the Mediterranean, and the past summer he spent again at Nauheim. During his sojourn abroad his cardiac affection did not give him much trouble. In the course of eighteen months he had but three moderately severe attacks. He returned about a month ago.

His general condition is now not quite as good as it was when he went abroad; but in the main the disease of the cord has not made any marked progress. There is to be noted the same retrocession of the fifth intercostal space as before observed. No friction sound, but a systolic apex murmur, although somewhat softer than previously, is at present audible. Pulse fast, but rhythmical. No marked hypertrophy or dilatation of right ventricle; less accentuation of second sound of pulmonary artery than before. Again, the systolic murmur is barely heard at the lower angle of the left scapula. When a systolic murmur is due to well-marked mitral re-

gurgitation, it is distinctly audible in the above region, as well as at the apex. In nearly every case of mitral incompetency under my observation, I have heard the systolic murmur just as loud at the lower angle of the left scapula as in front. From this and other physical signs already mentioned, I am inclined to believe that the endocarditis in Mr. F——'s case has not led to as much retraction of the mitral valves, as it was feared it would in the commencement of his cardiac trouble.

136 West Thirty-Fourth Street.

THE LOCAL TREATMENT OF BURNS.

By ROBERT T. MORRIS, M.D.,

New York.

For some peculiar reason several of the common principles which are applied in the treatment of wounds of the soft parts in general, and which may be used to the greatest advantage in managing burns and scalds of the second and third degree of Dupuytren's classification, have been shamefully neglected.

In quite a large number of burns which I have treated during the last summer and autumn, when these principles have been brought to bear the patients have been almost entirely free from pain during the whole time when the dressings were applied, and the long suppuration and ugly cicatrices which so often follow burns of the third degree have been reduced to matters of small importance, to say nothing of the avoidance of such secondary effects as are apt to follow intense local pain.

In describing the treatment it will perhaps be well to take as an example a hand and arm which were burned by an explosion of gunpowder. The possessor of the limb in question was a stout Irishman who came into the Dispensary of Chambers Street Hospital one day in July last, and the burned area included all of the surface from the tips of the fingers to a point just below the elbow. The larger part of the skin was burned to the second degree, and the cuticle with transuded serum beneath stood out in great blebs, or lay torn and wrinkled over the surface, looking like sheets of wet parchment.

About the wrist and on the back of the hand and between the fingers the burns were of the third degree, while at the upper portion of the forearm there was simply hyperæmia of the skin.

In the first stage of the management of the case all of the blebs were opened and every part of loosened cuticle carefully pulled away and trimmed off as closely as possible to the edge of the healthy skin, so that the inflamed surface was entirely exposed and dressings might be directly applied. Another point was also gained, by having this dead cuticle all out of the way, so that it could not form recesses for storing up the discharges, which would decompose and irritate the sensitive skin beneath.

Iodoform was next sprinkled thickly over the denuded surface and two more points gained—the iodoform acting as an ideal antiseptic and being analgesic to such a degree that complete relief from pain followed very rapidly on its application. Suppuration also was limited very decidedly by this agent by virtue of its action in restraining exuberant granulation.

Strips of cheese-cloth were then spread thickly with vaseline and the surface sprinkled generously with more iodoform, the strips next being wound closely about the arm and hand, care being taken to leave no wrinkles. Small pieces of the cheese-cloth prepared in the same way were then wound about the fingers. Sheet lint wrung out in carbolized water (1 to 40) was placed over this and the whole enveloped in gutta-percha tissue, the latter dressing serving to keep everything beneath warm and moist and thus fulfilling two extremely important indications, besides preventing the soiling of the cloths and bandages by the vaseline and discharges. An ordinary roller bandage was finally applied to keep the dressings in position, and everything was complete.

As it is a matter of considerable importance that the wounds be disturbed as little as possible in these cases, the man was told to return every third day. On his next appearance at the dispensary the patient was found to have had no pain whatever; and he did not suffer during the whole length of time required in the healing process except while the dressings were being changed and the surface was exposed.

In a few days the portion of skin which had been burned to the second degree was covered by a very delicate and beautiful bluish film of new epithelium, while the part burned to the third degree presented the most exquisite little granulations of the ambitious and well-regulated variety which so delight the eyes of the surgeon. With the formation of these granulations there was, of course, a production of a certain amount of pus, but not nearly in such quantities as we are accustomed to see it in burns treated in the ordinary ways, when the granulations have to wage war with the dressings at fearful odds, and become weak and worn out before they have half gotten to work at their legitimate occupation. In a very short time epithelium was shooting out over those parts which had been burned to the third degree, and the process went on rapidly and completely without any signs of lagging on the last half inch; the skin which eventually covered the wounds being natural in appearance, except in a few patches where the hair-follicles had been entirely destroyed, and in these places it remained smooth and somewhat glazed.

At one time, while the healing process was going on rapidly, the dressings accidentally slipped away between two of the fingers, and, when I next saw the man, these fingers were quite firmly united nearly to the last phalanx, making it necessary to pull them apart again.

The patient, whose burns have been described, was delighted with the process and results of the treatment. He had seen a good many similar cases, and had anticipated a painful and very tedious experience.

There were only two classes of cases among my patients where any pain was complained of after the first dressings had been applied. When very small vesicles existed in the thick skin of the palm or side of the foot, there was considerable pain until every vesicle had been carefully hunted out and opened, so that iodoform could be placed in the skin underneath; and, when the burns had involved the integument over a large joint, as the elbow or the knee, a subacute synovitis sometimes appeared, which was accompanied by a great deal of discomfort. In the cases which I have seen this synovitis has been controlled and the pain relieved by fixing the joint in an immovable position and bandaging quite firmly about it; but it is a question whether such treatment would prove sufficient in severe cases.

It is not customary with most physicians to open

all blebs and vesicles and trim away the dead cuticle; but, by way of experiment, I have sometimes allowed one or two blebs to remain, while others in the vicinity were opened and the dressings applied; and by the time that the surface under the latter was covered by epithelium, that of the others was hardly in the beginning of the healing stage.

HUMANIZED VACCINE VIRUS *VS.* BOVINE VIRUS.

By FRED. W. COOVER, M.D.,

VISITING PHYSICIAN HARRISBURG HOSPITAL, PA.

Having had during the current year what has been to me a very interesting series of vaccinations, giving the opportunity, as it did, of comparing side by side humanized and bovine virus in a fair and unbiassed manner, I have thought it might be profitable to the readers of The Medical Record to have a few of the cases reported in full, allowing them in this way to draw their own conclusions. I have been using bovine virus quite extensively for a number of years with what I suppose would be called the average success. I have preferred it for a number of reasons, the only trouble that would occasionally be annoying being the extensive inflammation it would produce, followed by a large slough with from four to eight weeks of suppuration, ending in a few cases with an abscess in the axilla; but what is still more deplorable, the prejudice this occasioned against vaccination, the parents declaring that in the future it would be omitted, they preferring to take their chances of getting small-pox rather than have their children thus tortured. Parents for this reason are allowing their children to go unvaccinated, and the amount of mischief done by an indignant and gossiping parent by prejudicing persons against vaccination, to say the least, is incalculable.

Sunday, May 14, 1882, before breakfast, I was asked to call immediately at the house of Mr. S——. Without making any inquiry as to the nature of the case, but from its urgency supposing it to be obstetrical, I hurriedly dressed, and upon reaching the house, much to my surprise, was told the following story: The evening before the father had been informed of the illness of his son Harry, aged twenty, who was working in a neighboring town, nine miles away, and that during the night he had brought him home in a wagon, and also, from the eruption that was appearing on his face, he feared he was getting small-pox. After making inquiry as to his symptoms, and examining the eruption, I had no hesitation in making a diagnosis of small-pox, and advised his immediate removal to the small-pox hospital. Giving strict directions that there should be no intercourse between himself and the other children, the parents having had small-pox; the mother agreeing to act as nurse, I left for the purpose of securing vaccine matter and disinfectants, which having obtained, I returned and vaccinated all members of the family, including the parents, using a whole quill on each person of what I had been assured was fresh bovine virus from a vaccine firm in an adjoining county. The abrading of the skin and applying the virus was carefully performed, as I recognized the gravity of the situation. There were four children: Will aged eighteen, Anna fifteen, Emma eleven, and Elmer seven. The two oldest had faint marks of a former vaccination, the two youngest none at all. Harry was removed to the hospital where, under my care, he successfully passed through a severe attack of confluent small-pox. The bed-clothing was taken with him in the wagon, the house was thoroughly disinfected, and the room he occupied closed. May 24th, just ten days from the time of the eruption making its appearance on Harry, Will, the next oldest, went to bed with the characteristic prodromata of small-pox, which terminated in about a dozen papules. Four days later, Anna passed through a similar mild attack. The vaccinations having failed to take in all, I was anxious to revaccinate the two youngest; the parents, however, refusing to give permission, they were allowed to take their chances. Twelve days later Emma was attacked with confluent small-pox, from which she recovered, the parents keeping her as well as the two former ones at home. There now remained but one more, Elmer, who, ten days later, was stricken with the confluent form, from which he died on July 25th, being the thirteenth day of his sickness. This family resided in the first of a row of three frame houses; the family living in the middle house sent their children away, while the occupants of the third remained, and were allowed by the family physician to go unvaccinated. August 1st, I was asked to see this family, numbering six persons, the physician in attendance being in doubt as to the meaning of the symptoms of which the mother and son, aged seven, were complaining. The mother developed the worst case of confluent small-pox that I have ever met with, the son's being semi-confluent; both, however, fortunately recovering. The same day I vaccinated the remainder of the family with what I considered reliable humanized virus. The father and oldest daughter had been vaccinated a number of years before, while the two youngest, aged seventeen and fifteen had never been. Both cases of small-pox were treated in the house, and the whole family were necessarily exposed to the contagion. But how different and gratifying the result of my vaccinations in this instance compared with those before narrated. They all, with the exception of the oldest daughter, got very sore arms, the father in particular complaining a great deal of his, though in constant attendance upon his wife, and what was so very satisfactory, the complete arrest of further spreading of the contagion, as I had no more cases to treat in that family.

I offer no comments, but my plan of vaccinating since this experience has undergone a change. I now, when called to a family where small-pox has developed, use bovine virus on one arm and humanized on the other, feeling satisfied that only in this way can I discharge my whole duty and give them every possible advantage of avoiding the disease; and I may add that, in every instance when this plan has been carried out, I have been able to prevent any new cases from developing.

The First Successful Ovariotomy in Bellevue Hospital.—Dr. W. Gill Wylie, of this city, writes: "In a recent issue a mistake was made in saying that I had performed the first successful ovariotomy in Bellevue. Dr. Wm. T. Lusk did ovariotomy successfully in a wing of the old building at Bellevue in 1878, and the case was reported. Until very recently there has been no suitable place at Bellevue available to the gynecologists for doing ovariotomy."

Reports of Hospitals.

RANDALL'S ISLAND HOSPITAL.

Strangulated Ventral Hernia.

(Reported by Willard P. Beach, M.D., House Surgeon to Randall's Island Hospital.)

The patient, a female, aged twenty, was admitted to this hospital, October 1, 1882, suffering from a large ventral hernia about the size of a cocoanut, situated in the left inguinal region in close proximity to Poupart's ligament, and resulting from a stab-wound received some two years previously, through which, according to the history, the intestine protruded down to the knees. At that time she was taken to Chambers' Street Hospital, and, after proper treatment, recovered. No unpleasant sequelæ followed, until six months ago, when a tumor began to show itself in this region and rapidly assumed considerable proportions. She again applied at Chambers Street, but refused to allow the necessary operation which was advised.

When admitted to this hospital, a deep ulceration one and a half inches in diameter was present over the surface of the tumor. The hernia was easily reduced, but the impulse on coughing required considerable strength to overcome. On the succeeding afternoon the patient was seized with vomiting, depression, etc., from which it was believed that strangulation had taken place. The hernia was instantly returned under ether, but the symptoms persisted throughout the night, with commencing discoloration and turgidity of the part; immediate operation (under Lister) was therefore decided upon. The hernial opening through the abdominal wall was found to measure three inches in circumference, the sac consisting merely of integument and with no adhesions present, although the gut was much inflamed and quite dark. The sac was afterward laid completely open, the superabundant skin cut away, and, after freely paring the edges of the deep opening, the parts were united by silver sutures passed through the entire thickness of the abdominal wall.

The patient soon rallied and made an excellent recovery, with no bad symptoms, the wound showing very little suppuration, and with complete reduction of the hernia. The subsequent general treatment consisted merely of the usual measures, and locally of an iodoform dressing, over which was placed a firm compress and bandage. No signs of general peritonitis supervened. One week after operation a natural alvine evacuation took place, and the bowels have since acted normally.

The case is rather a remarkable one in itself, but more so from the evident occurrence of strangulation, which rarely complicates this form of hernia.

New York to have a Crematory.—A report comes from Washington, Pa., that New York is to have a Crematory. It will be near the city and will have many improvements on the Lemoyne furnace, doing the work in much less time. It will be so constructed that the ashes can be removed before the retort cools, allowing friends to carry the remains home with them in their pockets.

Cremation of a Physician.—The body of the late Dr. L. Ehrhart, of Alleghany, Pa., was cremated at Washington, Pa., on November 26th.

Progress of Medical Science.

Diagnosis of Spurious Heart Murmurs.—Dr. Rosenbach (*Transactions of the German Medical Congress*, 1882) recommends the following simple procedure to determine the pneumocardial nature of any murmur: Firm pressure is made with the tip of the finger in an intercostal space at the point of maximum intensity of the murmur. In this way the portion of lung in which the murmur is produced is pushed away from the heart, and the heart itself is also pressed back, and is prevented from transmitting its pulsations to the lung with force sufficient to give rise to a murmur. The spurious, extra-cardiac murmurs are thus greatly weakened or entirely suppressed, while no effect is produced upon the true cardiac murmurs.

An Explanation of the Uræmic Seizure.—Dr. Rühle (*Transactions of the German Medical Congress*, 1882) states that in every case of death from uræmic convulsions œdema of the brain is found to exist. But simple œdema of the brain does not cause convulsions, and some toxic agent must be added to the serous exudation to produce this condition. That chemical changes accompany the uræmic attacks is shown by the fact that the gastric secretions become alkaline and that the breath turns moistened litmus-paper blue. So soon, therefore, as œdema of the brain comes on in the course of these, as yet undefined blood changes, it acts as a poison and gives rise to convulsions.

Placental Origin of Congenital Heart Disease.—Dr. Von Hoffmann records a case of congenital closure of the semilunar valve. The child suffered at birth from cyanosis, atelectasis, and great irregularity of the heart's action, and died from suffocation on the third day. The placenta had been previously examined and was found to be the seat of numerous recent and old extravasations. From these hemorrhagic foci pathological products had been introduced through villous absorption into the fœtal circulation, and had thus given rise to endocarditis. The placental extravasations had been caused by violent fits of coughing, from which the mother had suffered about the sixth month of pregnancy, which date also corresponded to the beginning of the fœtal endocarditis. Von Hoffmann advises the careful examination of the placenta in every case of childbirth, and believes that much light might thereby be thrown upon the etiology of diseases of the new-born.—*Transactions of the German Medical Congress*, 1882.

The Subcutaneous Injection of Various Salts of Silver.—Dr. Eulenburg presented a paper at the German Medical Congress, held in Wiesbaden (*Transactions*, 1882), in which he related some experiments undertaken by him to determine the utility of the hypodermic injection of silver. The uncertain results following the administration of nitrate of silver per orem he thought were due partly to a reduction of the salt in the process of compounding, and partly to chemical changes which it undergoes in the stomach. The first experiments were made with chloride of silver. Immediately after the injection no discomfort is experienced, but later some inconsiderable pain is felt for several hours. This is probably due to the deposition of metallic silver in the tissues. Some injections of the phosphate were made in rabbits without exciting

any local irritation. As this salt is soluble only in a strongly acidulated menstruum, trials were made of the pyrophosphate, which requires much less acid for its solution. No irritation followed the injections. Finally an albuminate was used with the same negative result. Previous trials of the nitrate had demonstrated that no evil effects followed its injection other than some pain, and, very rarely, slight inflammation. The author stated that a part of the injected salt is precipitated at the point of insertion, and a part passes in a soluble form into the blood and is excreted by the kidneys. From the experiments thus far made Eulenburg concluded that solutions of the silver salts in suitable form might be administered subcutaneously with advantage, and that the results obtained are much more certain than when the metal is given by the mouth. As regards the particular salt most suitable for hypodermic use, the author was as yet undecided.

THE VARIETIES OF CIRRHOSIS OF THE LIVER.—Professor E. Lancereaux distinguishes three varieties of cirrhosis of the liver—the syphilitic, the malarial, and the alcoholic. In cirrhosis of syphilitic origin the liver is deeply lobulated, furrowed, and adherent to the neighboring organs. The cellular hyperplasia seems to centre around the ramifications of the lymphatic and arterial systems. There is little or no ascites, no enlargement of the superficial abdominal veins, and no icterus unless from compression of the bile-ducts by the newly formed connective tissue. The course of this affection is slow, and the prognosis is favorable. In the malarial variety the liver is greatly increased in size, of firm consistence, and presents a smooth or slightly granular surface. The principal signs of malarial cirrhosis are hypertrophy of the liver and of the spleen, long-continued jaundice and slow progress. Alcoholic cirrhosis presents two forms. In one the liver is contracted, hard, fibrous, nodulated, and not adherent to the neighboring viscera. In the second form the organ is increased in size, of smooth or granular surface, presenting a connective-tissue hyperplasia with constant granular or fatty degeneration of the gland-cells. The diagnosis of the first form rests upon the emaciation of the patient, the dryness of the skin, excessive and steady increasing ascites, and dilatation of the superficial abdominal veins. Death usually results from mechanical obstruction to respiration. In the second form the hypertrophied liver and the absence of ascites resemble the signs of malarial cirrhosis, but the two varieties differ in the character of the icterus. In cirrhosis of malarial origin, jaundice is always present, but in the alcoholic form it appears late in the course of the disease, and is then of very grave prognosis. The patients usually present symptoms of great depression and die comatose. —*Revue de Médecine*, July and October, 1882.

OOPHORECTOMY IN ENGLAND.—The *Medical Press and Circular* laments the unfortunate frequency with which Battey's operation is at present being performed in England. It comments in the following way upon this topic:

"It is perfectly safe to assert that on no organ of the body are more doubtful operations performed than on the uterus and its appendages, and that in no department of medicine is the intellectual crippling of specialism more signally demonstrated than in that of obstetrics. Greed and the predilection engendered by special and limited study are apt to compel men to unravel all forms of disease, from the standpoint of the particular department of which they may happen to have taken parental charge. This is daily illustrated in the experience of every practitioner who chooses to have his eyes and his mind open to conviction. Quite recently, at the Obstetrical Society in London, Dr. Braithwaite, of Leeds, read a paper 'On Two Cases of Unilateral Oophorectomy,' the first of which was performed for a *cardiac affection*, associated with dyspnœa! and the other for pain in the left ovarian region. We thoroughly indorse the remarks of the President, Dr. Matthews Duncan, on these cases, that 'to remove one ovary as a treatment of cardiac dyspnœa he regarded as a wild proceeding; nor could he imagine that it ever could come within the range of rational medicine.' Surely the unfortunate women thus operated on do not properly apprehend the nature of the operation to which they are subjected. It is not so long ago since obloquy and contumely were showered on an unquestionably able surgeon—the late Mr. Baker Brown—for the operation of clitoridectomy; we seem to have made rapid strides since then; yet we have no hesitation in saying that in the cases indicated by Baker Brown clitoridectomy was an infinitely more justifiable operation than oophorectomy. We hope to hear less of this barbarous operation in future. At the same time we would protest against the indiscriminate examination of women at public institutions before crowds of students as demoralizing to all concerned. At a certain clinique for women, in Scotland, we understand that the vast majority of women who present themselves are examined with the speculum in the presence of the students, and the os daubed with 'iodized thymol' for all conceivable diseases. This disgusting and degrading practice should be circumscribed, not less in public than in private."

ARTIFICIAL CARLSBAD SALT.—Dr. Harnack, of Strasburg, who assigns no therapeutic value to any constituent except the chloride, sulphate, and bicarbonate, has found the salt to have the following composition: Sodium bicarbonate, 36.19 parts; sodium chloride, 17.28 parts; sodium sulphate, 46.09 parts. He therefore recommends to prepare the artificial salt as follows: Sodium sulphate, 100 parts; sodium bicarbonate, 80 parts; sodium chloride, 40 parts.

THE TREATMENT OF ERYSIPELAS.—In the *Wiener med. Presse*, June 18, 1882, Dr. Hastreiter recommends the treatment of erysipelas by painting with oil of turpentine, on the following grounds: 1. It can be employed on the most sensitive patients, does not require any skill, and can be applied by the patient himself as often as may be necessary, and the irritation produced by excessive friction is avoided. During its application the eyes should be protected by a pad. 2. When employed frequently enough this method is perfectly safe, and tends to produce a rapid cure. 3. Oil of turpentine can be procured everywhere. 4. All other dressings are unnecessary. 5. Internal antipyretic treatment is only rarely necessary; usually all that is necessary is to bathe the body with cold water, and to make use of cold applications to the head. 6. The inhalation of the vapor of turpentine can, perhaps, act as a preventive of the extension of the disease to the air-passages. 7. When employed at the outset of the disease it may abort the morbid process. 8. The oil of turpentine may also be employed in phlegmonous inflammation other than erysipelas.

In the *British Medical Journal*, August, 1882, Dr.

C. S. Hutchinson records a case of a large, robust man, who was thought to be *in extremis* from a violent attack of idiopathic erysipelas of the head and face. Iron and the usual internal remedies had been tried; but no external application had been used. Iodine was now painted on the scalp. This had a magical effect, the patient being out of danger two days afterward, the amendment beginning with the first application of the iodine. Dr. Hutchinson has never before seen so desperate a case recover so quickly. It should be remembered, however, that the occasional value of iodine in erysipelas has been known for many years.

The Fundamental Nervous Plexus of the Uterus.—M. Rein, of St. Petersburg (*Bulletin de la Société de Biologie*), states that he has specially studied the fundamental plexus of the uterus, because, both physiologically and clinically, an exact knowledge of this network is of great importance. His description of the plexus is as follows: 1. The general features of the fundamental plexus of the uterus do not differ from those of other organs composed of non-striated muscles. 2. It is extra-uterine, and is situated principally in the cellular tissue which surrounds the vagina, just where the hypogastric plexus anastomoses with the branches of the sacral nerve. 3. This plexus presents a large number of ganglion-cells. In the plexus of the guinea-pig, these cells constitute more than a hundred ganglia of different dimensions. 4. The ganglia are generally situated on the track of the principal efferent and afferent nerve-bundles of the plexus. There are a certain number of small ganglia also scattered about in the network of the plexus. 5. The hypogastric, sacral, uterine, and vesical ganglia, and also those of the fundamental plexus, can be recognized according to the position they occupy. 6. The uterine ganglionic cells of the guinea-pig and the rabbit are limited above by the horns of the uterus. Inferiorly, the fundamental uterine plexus mixes with the vaginal plexus. None of the fibres, either of the pneumogastric or of the sacral nerves, pass into the uterus until they have mixed with those of the fundamental plexus.

The Frequency of Disease of the Sexual Organs in Insane Women.—Dr. Danillo examined 200 insane women, and found that 162, or eighty per cent., were suffering from various diseases of the sexual organs. Out of 140 menstruating women, between fifteen and forty-two years of age, only 20 were without some uterine anomaly. Out of 60 women who had ceased menstruating, between forty-two and seventy-five years of age, 18 were the subjects of some affection of the genital organs. Acute and chronic endometritis and metritis were most frequently observed; less frequently, displacement of the uterus, dysmenorrhœa, acute and chronic ovaritis, and other diseases. The above results show that the complication of psychosis with uterine disease is a frequent occurrence, and of the greatest clinical interest.

Nineteen Months' Retention of Fœtal Bones in the Uterus.—Dr. Schramm describes the case of a woman, aged thirty-two, married twelve years, who had had eight labors, the first four of which had been normal; the last four had come at full term, but the children were born dead. The last labor was very difficult and lasted nearly four days. No post-partum hemorrhage followed, but the placenta, as well as all the cranial and some of the vertebral bones of the macerated fœtus, remained in the uterine cavity. Some weeks afterward there was an offensive discharge from the vagina, and, four months later, urine. During the last six or seven months the patient occasionally found small pieces of bone in her vaginal discharge. Having been called to see the patient nineteen months after her last labor, the author found her health deteriorated; there were fever, abdominal pains, constipation, and highly fetid discharge; the uterus was low down, and the os open, easily admitting a finger. The latter immediately came into contact with several friable bones of various sizes. The removal of them was accomplished without any difficulties, hemorrhage being slight. A vesico-uterine fistula existed. The general state of the patient soon began to improve, and the discharge of urine through the vagina considerably lessened.—*London Medical Record*, October 15, 1882.

The Treatment of Urethritis in the Female.—Dr. Fissiaux relates fifteen cases, in which Dr. Leblond treated blennorrhagic urethritis in the St. Lazare Hospital in the following way: A short stilette is wrapped round with cotton-wool, covered with coal-tar soap; this is passed into the urethra and retained there. It is renewed every other day. During micturition the patient prevents it from falling out by pressing it with her finger. The *rationale* of the treatment is that the tampon separates the folds of the urethra from each other, and thus keeps the whole surface of the mucous membrane at rest and in contact with the medicament.

Cascara as a Laxative.—Dr. Carter, of Liverpool, in an article on new therapeutic agents, writes to the following effect concerning cascara (*rhamnus purshiana*): The fluid extract prepared from the bark of this shrub, or small tree, is an excellent remedy in chronic constipation. I have used it now for two years, and have no doubt of its value. The fluid extract is reddish brown in color, and extremely bitter. A very good method of prescribing it is in a mixture, with twice its quantity of glycerine, or one of the flavored syrups. Of this a fluidrachm should be given three times a day, and the dose be diminished as soon as its aperient action is developed. It is what may be termed a tonic aperient, and seems to produce an effect somewhat like that caused by belladonna and nux vomica united with an ordinary aperient. It evacuates the whole canal. The motion is not watery, but usually semi-solid, truly feculent in character, and voided without difficulty, and so far from causing subsequent constipation, the bowels will often act regularly after its use has been entirely discontinued. I have used it so extensively, and the testimony to its value is so unmistakable, that it would be difficult to select particular cases to prove this.

A New Remedy for Chronic Dysentery.—Koroniko, from *veronica parviflora*, is reported by Dr. J. Jardine ("Chinese Customs Rep.") as a potent remedy in cases of chronic dysentery, varying in duration from six weeks to four years, and in which from twenty to thirty motions containing blood and mucus were voided daily. Fifteen doses of tincture of koroniko reduced them to one-half, another fifteen doses reduced them to three or four daily, and a third like quantity effected a complete cure. Koroniko seems to be the vulgar name adopted in New Zealand for the plant.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, December 9, 1882.

GENERAL MEDICINE AND MEDICAL SPECIALTIES.

We have frequently had occasion to point out the just claims to recognition of the general practitioner. In an era of brilliant achievements in all the special branches relating to medical science, the humbler calling and more modest pretensions of the physician in general practice are apt to be regarded in a spirit akin to superciliousness, not unmixed, perhaps, with pity. In view of such a condition of affairs, we can well afford to have the high, not to say surpassing importance of general medicine once more clearly and forcibly defined.

This was recently done at the first meeting of the Congress of German Physicians.[1] The speaker was a man of no mean reputation. Indeed, Frerichs may be said to stand in the very front rank of living clinicians. And certainly his fame in Germany is second to that of no contemporary, either as a popular teacher or as a learned author. His salutatory address, delivered in the capacity of president of the Congress, is pregnant with practical good sense. It appeals to the intelligence of the entire profession by the convincing force of its strict logic and temperate philosophy. Frerichs aptly compares the present epoch, which is characterized by so manifest a tendency toward specialism in medicine, to the time when the Alexandrian school of physicians began to flourish, and also to the period when Galen was the dominant spirit at Rome. Then, as now, the special sciences threatened to drift away from the common mother who gave them birth, and maintain a separate existence.

To-day there seems, indeed, ample justification for such a course. For no one can now hope to master all the branches of our vast science, in such a way as to be pre-eminent in each. And surely we should not attempt to belittle the great benefits which accrue to medicine, from a legitimate division of labor. May we not point with just pride to the astonishing advances made in the various specialties, and the flood of new light which has thus been shed on many a dark territory of the healing art? At the same time, however, we should not lose sight of the danger that lurks in the widening gaps that are appearing between the individual branches of medicine. The fundamental idea of singleness in the human organism is gradually fading away. We are too prone to disregard the broad general principles that govern all vital action in the body. There is no lack of precise knowledge concerning the different parts, but we may fail to grasp the thought that there exists a bond of harmony which makes them all a unit.

It is the important function of general medicine to supply the needed cement that must bind the various parts together. From the main stream of this science, side-currents may issue, but they must still be fed by the common supply, or else they will dry up and cease to exist. Barrenness and not fertility would thus result from too much separation.

The times are past when systems or dogmas could dominate independent thought, and prescribe our mode of action. Facts can no longer be controlled, or distorted by ruling ideas borrowed from philosophy or other foreign sciences. The healing art has outgrown its swaddling-clothes. It is able to stand on its own feet.

Our work begins with the study and knowledge of normal action in the healthy body. All departures from this standard properly come within our sphere of action. But the great source of all our practical knowledge has been, and always will be, the direct observation of the sick. The numerous questions and problems which confront us in our path, must finally be resolved by a last appeal to this, the highest tribunal which we recognize. To be sure, modern observation of the sick is not the simple thing of years ago. It is the exercise of all our faculties, assisted and rendered more acute by the various physical and mechanical devices that inventive genius has given us.

We hail with pleasure the great strides in advance which are daily taken by experimental pathology and physiology, by chemistry, and by the other accessory sciences. Certainly we must duly recognize the material aid, which we receive through their progressive exertions. Nevertheless we remain masters in our own house. We require no guardianship. Our own experience, our personal insight must be the standards by which we gauge true work and permanent acquisition. To separate the bran from the chaff we must rely upon ourselves solely. General medicine has only too well known the disastrous consequences of tutelage, or foreign inter-

[1] Verhandlungen des Congresses für Innere Medizin. Erster Congress gehalten zu Wiesbaden, April, 1882. Wiesbaden: J. F. Bergmann. 1882.

ference, be this from what special science it may. Neither philosophy, nor chemistry, nor pathology, nor yet experimental physiology, can do our work for us. The labor must be all our own. Then, indeed, the edifice being our own construction, will be sure to stand securely.

What has been said concerning the more remote sciences may be applied also to therapeutics. Doubtless we owe a great debt to modern experimental pharmacology, which frequently supplies us with the strictly scientific explanation of curative action constantly observed. But even experimental pharmacology cannot supplant direct clinical experience, than which we have no better index of rational interference in disease. Along the path thus mapped out, aided by an intelligent empiricism, the permanent achievements of the healing art must ever come. And who shall say that the future is not bright with the promise of great results, greater than any that the past has yet bestowed.

THE INSTRUCTION OF DELEGATES.

From time to time, since last February, we have observed that some of our County societies have instructed their delegates to the approaching session of the Medical Society of the State, as to how they should vote on the question of the repeal of the new Code. It has been easy to understand how this has been done in some counties, when meetings of the Medical Society occur only once a year, and where very little interest is, as a rule, taken, except by a minority of the small number constituting the Society. It is not a difficult matter in such a body for a man with a little facility in what is called personal or machine politics to secure the instruction of delegates. If a set of resolutions be ready—and they have usually been supplied this year from a prolific, although ephemeral pen—it is not a difficult thing to pass them, even if a few timid and whispered scruples find utterance from one of the corners of the room. This done, the delegates recite a few cases, elect the man whose turn has come to represent them in Albany, and adjourn. Well, as we understood how all this was done in some of the sparsely settled counties, where the medical society may easily become a pocket borough, we were, we must confess, surprised to find that our neighboring large and influential society of the County of Kings had placed itself in the attitude of a set of machine politicians, who have "fixed" the primaries, and have instructed the delegates. The feat of "fixing" matters was not as easily accomplished in Brooklyn, however, as it is in the interior, where the time for discussion is remorselessly cut off by the departure of the afternoon train. The wordy preamble and resolutions, ending with the instructions which convert the delegates into puppets, ready to dance when the wires are pulled by the showman, were only passed by a small majority in a total number of about ninety-one votes. Without regard to the question at issue in the resolutions passed by the Medical Society of the County of Kings, we believe that the sober judgment of the profession is entirely against any such forestalling of public opinion as is shown by specific instructions on questions that must undergo discussion in order to be settled.

At first glance, it may appear to be a very proper thing to instruct delegates, yet to believe this is to assert that in a question which admits of debate, nothing new can be added by the members from other bodies when the subject comes up for general discussion and final decision. Besides, if, in the opinion of the society that instructs, the right view of the subject is perfectly plain, and if the voice of that body is unanimous or nearly so on that side, where is the necessity for instructions? Their delegates being men of like manner with themselves have gone over this question from every possible point of view, and will certainly act with their constituents. But, it is because these things are not so, that instructions are resorted to by mere managers to carry out their own personal ideas and plans. They do not have a serene confidence in the truth and equity of their own views. Therefore they wish to avoid the conflict in the large arena of free and frank discussion, and choose, by dexterous scheming, to wage a petty contest in a small field, where there are few and perhaps insignificant opponents.

We do not believe that the medical profession is about to adopt the methods of "machine" politicians, just as even these men are forced to abandon them. A delegate is an ambassador, a representative possessing discretionary powers. He is not a registering machine or an orderly. The scant majority of the Kings County Society will yet regret that they have been led by their over-zealous leader, into an action which makes phonographic apparatuses of their delegates. These twelve gentlemen need hear nothing of the discussion on Codes of Ethics which is sure to occur at our next meeting. They may stay quietly in their hotel, and at the proper moment be summoned to take part in the call of the yeas and nays. If present, they may consume their time with newspapers or the advertisements of instrument makers, if at the proper moment they vote solidly as has been agreed upon by the junto that has created them.

Let Kings County pass whatever resolutions the majority see fit, let them select the men they may choose, but as they value the preservation of free thought, fair discussion, in the medical profession, let them not instruct their delegates as to how they shall vote on broad questions, which the whole profession of the State meet to discuss, and after discussion to decide. If we do not wish the proceedings of our State Society to resemble those of ward primaries, let us not in other bodies imitate the

action of the small majority of the Kings County Society. If this action is to be taken in other counties, we may well be thankful that we have in our body a set of permanent members whose judgment will remain untrammelled by instructions and unawed by vulgar clamor. We do not envy the feelings of the Brooklyn delegates when they sit down among their fellows in Albany with the thought that whatever may be said they have no alternative but to vote as they have been directed to. But we shall be much disappointed if twelve men can be found in the ranks of the profession in our sister city, who will consent to take their voting orders in their pocket without discretion or room for variation.

The last meeting of the American Medical Association was no model for the Medical Society of the State of New York. There was no serious discussion on the subject of the action of the State of New York upon the code. Whether that action be right or wrong, it deserved the careful and respectful consideration of the delegates from other States. Instead of this, without a hearing, a prearranged plan was carried out by a set of managers, who must have obtained their notions of the proper way of determining vital questions of principle from a typical political convention.

The members of our society have been accustomed to decide the questions that have arisen among them, after hearing what has been said by those who differ as to the proper course. They have not hitherto come to their annual gathering with collars about their necks engraven with their master's stamp. In spite of the unwise action of a few counties, we have no reason to believe that our ancient and honorable body will take a step backward and become a machine to register the orders of any clique, or, still less, of any would-be manager. Indeed, it may be doubted if any instructions to delegates on questions that are in their nature only to be determined by argument and discussion are valid. It would not be surprising if they were declared illegal. Certain it is, that if they had been secured by the tyranny of a scant majority or by the acts of petty political managers, they are subversive of all the principles that should regulate legislative bodies.

THE NEW PENAL CODE.

THE new Penal Code, which went into effect on December 1st, contains a number of clauses which are of interest to the medical profession. The Code in question is, for the most part, only a re-statement of older laws. These are, however, presented in a much more compact and intelligible form than ever before.

In Section 8 the subject of responsibility is dealt with, and it is stated that every person is assumed to be responsible for his acts except as otherwise specified. A child under seven years of age is not capable of committing a crime, while between the ages of seven and twelve responsibility is presumed to exist, but may be removed by proof. Regarding insanity the old test is retained. The Code says: "A person is not excused from criminal liability as an idiot, imbecile, lunatic, or insane person, except upon proof that at the time of committing the alleged criminal act he was laboring under such a defect of reason as either not to know the nature and quality of the act he was doing, or not to know that the act was wrong. A morbid propensity to commit prohibited acts existing in the mind of a person who is not shown to have been incapable of knowing the wrongfulness of such acts, forms no defence to the prosecution therefor."

Suicide is an act which the law has always wished to prevent, and has always considered a grave public wrong. Attempts at suicide are, in the present Code, severely punished as felonies. Any person who assists or abets another in committing suicide is made guilty of manslaughter.

Despite the number of homicides which it is customary, with grim pleasantry, to attribute to the medical profession, there is very little in the Code that specially touches upon us. A physician who, in a state of intoxication, gives by mistake a poisonous drug to a patient which kills the patient, is guilty of manslaughter in the second degree.

Regarding the disposition of the body or of any part removed by a surgical operation, the following law is provided: "A person has the right to direct the manner in which his body shall be disposed of after his death, and also to direct the manner in which any part of his body which becomes separated therefrom during his lifetime shall be disposed of."

The stealing of a dead body from a grave or vault to sell or dissect, or from wantonness, is a crime to be punished by not more than five years' imprisonment and a heavy fine. It is made a crime also to attach a dead body for debt or to obstruct or detain a funeral.

Much public attention has been called to that part of the Code which revives the Sunday laws. These are very rigid if literally interpreted. All servile labor, excepting works of necessity and charity, are prohibited, and so also are all public sports, exercises, and pastimes. An attempt to carry out such provisions strictly would be impossible in a cosmopolitan city. In discussing their merits, however, one should bear in mind that there is especial need at the present day of preaching the gospel of rest. The State might well, for sanitary and moral reasons, insist upon some restrictions as to servile labor and public amusements upon the Sabbath. The physician should plead for a sanitary Sunday as the clergy do for a religious day. Rest and such recreations only as give rest ought to be provided for.

AN IMPORTANT CHANGE IN THE STRENGTH OF OPIUM AND ITS PREPARATIONS.

In the November issue of Dr. Squibb's *Ephemeris*, attention is called to an important change in the strength of opium preparations made by the United States Pharmacopœia for 1880.

By the older process, opium, when dried at 212° F. until it ceases to lose weight, yields at least ten cent. of morphia by the officinal process. Tinctures made from such powder have a strength of four grains (gr. iv.) of morphia, equivalent to 5.33 grains of crystallized sulphate of morphia to the fluid ounce. This gave, as a full anodyne dose of the tincture of opium, by the process of 1870, twenty-four minims, or about thirty-eight drops.

But the Pharmacopœia of 1880 says that its powdered opium should contain not less than twelve nor more than sixteen per cent. of morphine when assayed by the process given under opium. Dr. Squibb states that a better process of assay will give account of from thirteen to seventeen per cent of morphia, the average being fifteen per cent.

The officinal powdered opium, therefore, of the new Pharmacopœia contains fifteen per cent. of morphia against ten per cent. in the powder of 1870. This powder will give an average proportion of six grains of morphia, equivalent to 7.5 grains of sulphate of morphia, to the fluid ounce of tincture. This makes sixteen minims (℥ xvi. = gtt. xxv.) the full anodyne dose of the new tincture, this dose being equivalent to one-fourth of a grain of morphia, and being just one-half stronger than the tincture of 1870. A proportionate increase is, of course, made in all the other preparations which are manufactured from the powder.

The changes thus described are most important, and should at once be known to the profession. They ought especially to be understood and adopted by all druggists, because they secure a more constant strength to the opium preparations and lessen the bulk of the medicines prescribed.

It will, however, be some time before the new processes are uniformly followed. Meanwhile, the physician should in his prescriptions indicate to the druggist, by the figures "1870" or "1880," which preparation he wishes used. And he should give his pharmacist the liberty of using either preparation, substituting the equivalent amounts. Thus, if he writes for twenty-four minims of tincture of opium, "1870," the druggist may use sixteen minims of "1880."

It is a serious thing to change the dosage of a frequently used and poisonous drug. It will cause for a time much annoyance to doctor and druggist, and may not be without danger, especially in prescribing for the young.

We are not quite so confident as Dr. Squibb is that the change was seriously needed, and it seems like an inexcusable oversight in the Pharmacopœia Committee not calling attention forcibly to the matter. The increase has been made, however, and must be accepted. The strength of opium preparations will be more constant, and doubtless, after a few years, the improvement will be generally admitted.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN PRACTICE.

ANDREW H. SMITH, M.D., IN THE CHAIR.

DR. L. WEBER read a paper (see page 651) in which he reported a case illustrating

A CAUSAL RELATIONSHIP BETWEEN LOCOMOTOR ATAXIA AND CARDIAC DISEASE.

DR. PUTZEL thought the reports of the French observers with regard to valvular disease of the heart should be taken only with some allowance. As a rule, it was found that they had an enormous number of cases of valvular murmurs, and it seemed to be an impression that they called hæmic murmurs valvular murmurs.

The peculiarity of the German cases was that they were females, and he thought it was a rare thing to see so many cases among women. With reference to the co-existence of the two diseases, he thought it was difficult to say which developed first. It was well established that evidence of valvular disease of the heart might not be discovered until several years after the occurrence of an attack of acute rheumatism. For example, a case came under his observation in which there was a distinct mitral regurgitant murmur, and yet on close inquiry no evidence could be obtained that, during an interval of fifteen years between an attack of acute rheumatism and the development of the symptoms for which the patient sought relief, there had been any symptoms directing attention to the heart.

He was unable to understand how locomotor ataxia could produce cardiac disease, unless by acting through the pneumogastric nerve; but if it was believed that it was produced in that way, he thought the patient would not live long enough after invasion of the pneumogastric to allow the development of organic cardiac disease. He asked Dr. Weber with reference to the manner in which he believed the heart disease was produced by the locomotor ataxia.

DR. WEBER said that he was not prepared to state how it was produced, nor to say absolutely that the cardiac disease had its origin in some way with locomotor ataxia. The clinical facts were that, in a case of true locomotor ataxia, slowly progressing, there was no evidence of cardiac disease up to a certain date, and that then, without the occurrence of rheumatism at any period of life or the known existence of any of the recognized causes, endocarditis and pericarditis developed. No arthropathies had appeared during the course of the ataxia. He believed that if the locomotor ataxia had not been present the sexual intercourse would not have been followed by endocarditis and pericarditis.

Dr. Leale said that he had seen a number of cases in which pericarditis had been produced by violent horseback exercise in patients who were anæmic. He regarded it as important to avoid excessive exercise, without regard to form, in all cases of anæmia.

Dr. B. Robinson thought that the French observers were fairly qualified physical diagnosticians. He also directed attention to the fact that a certain number of very good observers had attributed what were commonly known as hæmic murmurs to dilatation of the valvular orifices; that is, that an endocardial murmur might be due to dilatation of these orifices, and not always indicate the existence of endocarditis.

The Chairman thought that in cases in which two diseases had existed for considerable time, the chances of their co-existence were very great.

The Chairman then reported cases illustrating

THE ACTION OF CONVALLARIA MAIALIS UPON THE HEART.

The first was a case of typhoid fever, in which the pulse was rapid, feeble, finally imperceptible at the wrist, the first sound of the heart scarcely audible, when convallaria was administered hypodermically, with the result of restoring the power of the heart's action so that both sounds were distinctly audible and the pulse fairly full, and although the case terminated fatally the heart-sounds remained distinct to the last minute.

The second was a consultation case, in which the patient, suffering from peritonitis and under the opium treatment, suddenly went into a condition of collapse. The opium was administered in pill form. The urine contained abundance of albumen. The patient was about thirty-five years of age. Caffein and atropia had been given and the galvanic battery had been applied. The man was apparently dead. The battery was continued. Convallaria was used hypodermically.

After the lapse of nearly half an hour the heart's action began to increase in strength and exceedingly shallow infrequent respiration returned. Ultimately the patient was restored.

The preparation used was the fluid extract made by Parke, Davis & Co., of which the dose is from five to ten minims, given hypodermically and repeated in half an hour if no effect is produced by the first dose. He could readily see that such a remedy might be potent for evil as well as good.

Dr. B. Robinson had used this drug during the last two months in cases of cardiac and renal dropsy when there was deficient heart power, and with favorable results. He related a case in which caffein and digitalis had been administered and failed to give tone to the heart sufficient to afford any relief for the dropsy in a case of cardiac disease. Convallaria was substituted and with beneficial results. What the precise conditions were which indicated its use he had not been able as yet to determine.

Dr. John C. Peters referred to the *tincture of cainca* in drachm doses as a very serviceable diuretic in cardiac and renal dropsy.

Dr. Leale asked what the diagnosis was in the second case reported by the Chairman, and from that point a general discussion occurred on

THE OPIUM TREATMENT OF PERITONITIS.

The following items of clinical experience were brought forward: That fatal opium narcosis may be developed without either gradual reduction or marked change in the number of respirations per minute, hence reduction of the number of respirations is not an absolutely safe guide in the administration of opium in the treatment of peritonitis. That the use of opium in pills was liable to be followed by alarming if not fatal narcosis, especially with diseased kidneys. That in some cases the urinary secretion is so diminished in quantity as to necessitate partial suspension of the opium treatment. That it was not always safe to estimate the quantity of opium to be administered by the pain suffered by the patient.

The Section then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, November 27, 1882.

David Webster, M.D., President, in the Chair.

MALARIA IN CHILDREN.

Dr. L. Emmett Holt read a paper on the above subject, in which he said that the peculiar manifestations of malaria in children was a field of observation which had been much neglected, especially in this country, where the opportunities for its study were so much more extensive than had been enjoyed by either English, French, or German observers. Most of our foreign text-books did not allude to malaria in children. Most American authors had contented themselves with a brief description of the remittent and intermittent varieties, dividing the disease into stages seen in the classical cases in adults. The organism of the child was especially susceptible to all acute infectious diseases, and malaria formed no exception to the rule. The poison acted not only more rapidly, but more generally and profoundly in children than in adults. Again, the susceptibility of the nervous, the digestive, and the respiratory systems produced such variations in the form and type of the disease as to mislead, at times, even the most careful, in diagnosis.

The author of the paper confined himself to symptomatology and diagnosis, as the etiology, pathology, and treatment did not differ materially from the same in adults. Dr. Holt then proceeded to give the results of his observation in 184 recorded cases. Nearly all were dispensary patients, belonging in an acknowledged malarial district, between Eighteenth and Fifty-fifth Streets, and west of Ninth Avenue, in New York.

With reference to *invasion*, it was gradual much more frequently in children than in adults. In 117 cases the invasion was abrupt in 45, and gradual in 72. Of 106 cases, the time of the invasion was in the forenoon in 35, and in the afternoon or evening in 71. He believed that division into stages might advantageously be dropped when studying the disease as it occurs in children.

With reference to *chill*, it was present in 19 out of 150 cases, and in only about one-half of these was it at all pronounced, and in every instance where it was well marked the patient was over eight years of age.

Fever was one of the most important and constant of all the symptoms. Very few cases occurred in which it was not present to a greater or less degree. He divided the cases with reference to fever into *three* groups: (1) those in which the temperature rose quite high at the outset and remained so for from twenty-four to seventy-two hours, and afterward assumed a

distinct remittent type; (2) those in which the fever was at first slight at some particular part of the day, but gradually increased in intensity and lost its periodic character; (3) those in which the fever assumed a distinct type from the outset, remittent or intermittent, and recurred regularly until controlled by quinine. The last was the rarest variety.

Sweating was noted in a little more than one-half of the cases.

Central symptoms, in some form or other, could be said to be the rule. Pain in the head was the most frequent. The next in frequency was drowsiness, or apathy; in some cases it might amount to stupor. Convulsions occurred in four cases out of one hundred and eighty-four. Vertigo seldom occurred in children. Pains in other parts of the body were usually complained of by children who were old enough to make their symptoms known. *The most characteristic was pain at the epigastrium.* His attention was first directed to this symptom by Dr. John H. Ripley. Dr. Holt believed it to be neuralgic, depending, perhaps, upon congestion of the stomach, which was found as one of the lesions in most of the fatal cases. Pains in the splenic and hepatic regions were complained of occasionally, but much less frequently than at the epigastrium.

The condition of the *spleen* was recorded in 79 cases; in 64 it was found enlarged; and in 38 very markedly; in 11 no increase in size was found. With reference to the size of the spleen his observation sustained Dr. Janeway's statement that unless the spleen is enlarged it does not come in front of the middle axillary line.

Disturbances of the digestive system were almost uniformly present, and usually pronounced. Vomiting was present in 78 of 112 cases. In almost all cases complete anorexia existed. The condition of the tongue could be placed among the diagnostic symptoms. The typical tongue was normal or slightly reddened at the edges and tip, while the centre is heavily furred with a brownish yellow coat, which shades off into a dirty white. A clean tongue had been noted in only 9 cases.

In 140 cases in which examination was made with reference to the *condition of the bowels*, they were reported as regular in 58, and constipated in 55. Looseness or diarrhœa was present in 27 cases.

As regards *thoracic symptoms*, there were none in simple malaria beyond slight cough from bronchial catarrh, which was exceedingly common. So far as he had been able to ascertain, *symptoms referable to the genito-urinary apparatus* had not been mentioned by authors. He had noted their presence in 17 cases, incontinence in 6, retention in 3, and in 6 frequent and painful micturition. Examination of urine negative.

COMPLICATIONS.

Of these the author of the paper made three groups: (1) the respiratory; (2) the gastro-intestinal; and (3) the nervous.

He had not met with any well-marked cases in which *laryngeal symptoms* of malarial origin were present. Such cases, however, had been mentioned by some writers. *Bronchitis* was, perhaps, the most frequent of all the complications, being present in about one-fifth of all the summer cases, and in fully one-half of the autumn and winter cases. *Pulmonary congestion* with symptoms quite uniform and characteristic. The invasion had always been acute; the temperature high, 104° to 106° F.; respiration rapid, resembling the panting of lobar, rather than the labored breathing of lobular pneumonia; face often cyanotic; pulse rapid; slight increase of fremitus; dulness on percussion usually slight; respiration always high-pitched, sometimes broncho-vesicular; resonance of the cry exaggerated; sonorous râles; occasionally coarse and fine mucous râles high-pitched.

That pneumonia, either lobar or lobular, occasionally complicated malarial fever, there was no doubt. *True spasmodic asthma* was recorded in 6 cases, based upon the occurrence of repeated attacks in the marked enlargement of the spleen, and the prompt relief by the exhibition of anti-periodics.

Of the *gastro-intestinal complications*, periodical vomiting and diarrhœa were mentioned especially. Of the *nervous complications*, mention was made of neuralgias, which did occur, but not so frequently as in adults. Motor disturbances were less frequent than sensory. Various spasmodic disorders had been recorded. Chorea had complicated two cases.

Several other complications were mentioned, as *vaginitis* in 3 cases, *hemorrhage from the gums* in 2 cases, *epistaxis* in 1 case, and *nephritis* occurred in 2 cases, in one slight, and in the other the patient died comatose on the sixteenth day of his sickness, after having been circumcised by another physician for retention. *Urticaria* occurred in two cases. *Jaundice* had not been met with, nor had Bohn observed it in any of the four hundred and thirty-five cases he had recorded. *Herpes* about the mouth was not uncommon. *Tonsillitis* associated with malarial fever had been observed in a few cases. The author of the paper then passed to the questions of diagnosis and relapses, after which he gave the following conclusions:

First.—That malaria in early life presents symptoms as distinctive as any other disease of children.

Second.—That the classification of the cases as intermittent or remittent and the division into hot, cold, and sweating stages, as in adults, leads to misapprehension regarding the course of the disease and to confusion in diagnosis.

Third.—That in any acute febrile disease presenting an unusual course the spleen should always be examined, especially in malarial districts.

Fourth.—That in obstinate cases of diarrhœa or bronchitis not affected by ordinary remedies, especially if those symptoms show a tendency to periodicity, malarial fever should always be investigated as a possible cause.

Fifth.—That spells of drowsiness and frequent attacks of epigastric pain should always excite suspicion.

Sixth.—That in children it is even more necessary than in adults to interrogate every organ before making a diagnosis when the symptoms are at all obscure.

DR. J. LEWIS SMITH said that he had been familiar to a considerable extent with the disease as it had manifested itself in the region mentioned by Dr. Holt. The term malaria he regarded as a rather comprehensive one, and he thought the author of the paper included in it two forms of fever: 1, that due to marsh miasm; and 2, that due to emanations from polluted soil and sewer-gas. The majority of the cases which he had seen that pursued a course extended to much length had been cases of typhoid fever, and he had regarded these so for the following reasons. There had been a degree of contagiousness in them. There is not that degree of intestinal catarrh in these young children which is present in adults, but in a large proportion of the cases he

had seen there had been diarrhœa. The lesions of typhoid fever had been found at autopsy in some cases. Quinine did not shorten the duration of the affection. It might moderate the fever but the disease would continue for a certain length of time, whereas if it was due to marsh miasm quinine would shorten the duration if not cut the disease short.

The symptoms he had observed were similar to those detailed by Dr. Holt, and he had especially noticed that hyperæsthesia was present in almost all cases, particularly on the inner aspect of the thighs and associated with tenderness. The duration of the disease, so far as he had observed, was very variable, and the milder cases would run on despite treatment. He had preferred to designate most of these cases as remittent rather than malarial, regarding infantile remittent as typhoid fever.

Dr. John C. Peters thought it important that the ages of the patients should be given in Dr. Holt's cases. Practically, there was no great difficulty in making a diagnosis when the patient was over five years of age; prior to that age the difficulty was very great.

He also was of the opinion that it was sometimes exceedingly difficult to differentiate the cases referred to by Dr. Smith from fever due to sewer-gas, which was very frequently distinctly periodic in character. That fever and ague might occur in children soon after birth seemed well established, but the mother was suffering from the disease at the same time. Convulsions were of frequent occurrence. He referred to a case in which the thermometer alone decided the character. The chill was absent. There was daily febrile movement. The convulsion occurred and then the child remained unconscious. Five grains of quinine were given three times a day for several days, and the child finally recovered entirely.

Dr. Fruitnight spoke of the convulsions in children as the analogue of the chill in the adult. He had observed the occurrence of epigastric pain frequently and regarded it as a valuable symptom. In nearly all the cases he had seen general hyperæsthesia had been present, and in some cases might have easily misled in diagnosis, suggesting the presence of cerebro-spinal meningitis rather than malarial fever. He corroborated Dr. Holt's statement that the stages as described in the affection occurring in adults were not well marked in children. In closing the discussion Dr. Holt said that the majority of his cases occurred between the ages of two and six years.

The Society then adjourned.

Pessary on the Brain.—In a speech at the recent meeting of the British Medical Association, Professor Playfair speaks of the "overmuch and injudicious local treatment" of the uterus. He alludes to a case in which "the patient may fairly be said to be suffering from pessary on the brain—so incessantly is she thinking of one or other of the *seventy-nine* different instruments which she has had inserted in the last few years in America and in this country."

No Complaint.—A man, in passing a country churchyard, saw the sexton digging a grave, and inquired: "Who's dead?" Sexton—"Old Squire Bumble." Man—"What complaint?" Sexton (without looking up)—"No complaint; everybody's satisfied."

NEW YORK SURGICAL SOCIETY.

Stated Meeting, November 14, 1882.

T. M. Markoe, M.D., President, in the Chair.

Dr. McBurney presented a patient upon whom he had operated for the cure of a long urethral fistula situated at the peno-scrotal junction. The patient was sent to Dr. McBurney by Dr. Geo. A. Peters, and gave the following history: As a result of gonorrhœa and stricture, an abscess appeared in January, 1881, at the peno-scrotal junction. This abscess was opened, and the opening afterward refused to close. Four attempts had been made by other surgeons to effect a closure without success. The patient was first seen by Dr. McBurney in March, 1882. At that time there existed a fistulous opening, one inch and a quarter in length, and embracing the entire width of the urethra just anterior to the scrotum. An opening also existed in the perineum, through which most of the urine passed. The first operation was done by Dr. McBurney on March 6th, in this manner: The opening in the perineum was first made perfectly free. A large, oblong flap of skin with its attached base at the left edge of the fistula was then cut and dissected up. This flap was inverted over the fistula, the edges of the cutaneous surface of this flap having been made perfectly raw, and raw surfaces having been made above, below, and to the right of the fistula. The flap was firmly stitched in place with fine carbolized silk. To cover this flap as well as the surface from which it was dissected, a long, oblong flap was dissected up from the scrotum immediately behind the fistula. This flap was easily drawn forward, pulling the scrotum with it, and was securely fastened with fine silk sutures. From this time on the urine was regularly drawn with the catheter introduced through the perineal opening. Union took place throughout, with the exception of about three-fourths of an inch at the right edge. To close this opening it was necessary on April 11th to freshen the adjacent edges and to draw one edge under the other. Complete union then took place rapidly.

The perineal opening, which had been kept open for many months before Dr. McBurney saw the case, was closed by one operation after he had made unsuccessful attempts with the cautery.

The operation done on the perineum was that recommended by Szymanowski. The urethra of this patient now admits a No. 29 F. sound with ease; he has normal erections without curvature of any kind, has no discharge, and no dribbling after urination. The original condition of the fistula was shown in a water-color drawing made by Gaertner from nature.

Dr. Keyes then read a paper on "Pneumo-Urea."

ALARMING CHLOROFORM NARCOSIS.

Dr. E. L. Keyes narrated a case as follows: A female child, five years of age, and apparently perfectly healthy, so far as the heart and lungs were concerned, came for diagnosis with reference to vesical calculus. Chloroform was administered, not more than one drachm being consumed, and the examination had been completed, when suddenly the child's face turned a livid grayish color, it gasped for breath, and the heart ceased to beat. He injected ether into the leg, held the child upside down, made intermittent pressure upon the walls of the chest, held the lower jaw forward, a slight gasp

occurred, followed by very feeble pulse, and in half a minute or so the child began to breathe in a gasping disagreeable way. There was a marked improvement at the end of four or five minutes in the respiration and the condition of the pulse, but the child was entirely unconscious and exceedingly feeble. The breathing and the pulse remained very feeble for three-quarters of an hour, and for an entire hour was the child held absolutely upside down. Twice during the hour an attempt was made to place the patient upon her back in bed, but on both occasions the face became at once pale and the pulse flickering, so that it was necessary again to place the child in the inverted position. After two or three hours the patient was fully restored. He had heretofore regarded chloroform as a safe anæsthetic for children with healthy lungs and heart.

Dr. F. Lange presented

THE UTERUS, A FŒTUS, AND A TUMOR WEIGHING SIXTEEN POUNDS

removed from a woman, thirty-six years of age, who had been married four years, had never been pregnant, but first noticed that her belly was increasing in size in February or March, 1882. Her menses remained regular until May and then ceased. The increase in the size of the abdomen then went on rapidly, and during the last three months she had been obliged to keep the upright posture, had sufferred from loss of sleep and appetite, and mental depression, and had emaciated rapidly. Dr. Lange saw the patient for the first time about two weeks ago, when after examination and consultation, it was not decided positively whether or not she was pregnant. The tumor had crowded the uterus so far over into the left iliac fossa, that only a small segment of it could be felt through the abdominal walls. It was thought that ballottement with the child's head could be made out. The uterine probe could be introduced without the slightest resistance to the depth of four or five inches. The sounds of a fœtal heart could not be heard. There was a uterine bruit, but that was frequently heard with large pelvic tumors as well as in pregnancy. It was decided, however, to open the abdomen, ascertain the condition of the parts, and then determine whether anything could be done to relieve the woman. The operation was performed November 4, 1882. It was found that the tumor was adherent to the omentum, to the abdominal walls, especially the front part, and to the intestines, and that the adhesions were exceedingly vascular. He resolved to undertake to remove the tumor, and proceeded to apply double ligatures to the adhesions, some of which were very broad, short, and difficult to secure, especially those with the anterior wall of the abdomen. The ligatures were applied by using a device of Tiersch, of Leipzig, which consists of two spindle-shaped ebony pieces, which are perforated in the middle and connected by thread. One of them is pushed through the tissues, and both are used as handles to exert a great force in tying the ligatures. For deeper-seated tissues the spindles are bent, of metal, and carried through by means of a long forceps devised for that purpose.

Finally, it became necessary to decide whether he would endeavor to remove the tumor and leave the uterus, or remove the whole mass. He decided to remove the tumor first, but there was so little space that, in order to give a little more room, he had to puncture the uterus and let out a quantity of fluid. At last he was able to reach the pedicle, secure it, and then to remove the growth, after the last adhesions toward the back wall of the abdomen had been secured. There was then left a bleeding pregnant uterus, and the question arose as to whether or not he should sew up the puncture, and leave the organ with the stump of the pedicle upon it and a child within it. There was already some blood in the small pelvis, and no possibility to get into it in order to make a thorough cleansing of the peritoneum. He decided to perform supra-vaginal amputation of the uterus, and at once made a large incision through its walls, and removed the child, which made a few respirations and then died. An elastic ligature was then passed around the cervix of the uterus, after the peritoneum had been incised somewhat above and loosened up to a line somewhat below the intended spot for it. Adhesions and stump of uterus were cauterized with the Paquelin, the stump of the uterus powdered with iodoform, as were all the spots where the peritoneum had been torn. One adhesion with the abdominal wall, near the liver, bled very obstinately, and for several minutes here the cautery had to be applied. On the anterior abdominal wall several pedicles, from tied adhesions of considerable thickness, were secured between the edges of the large wound by means of Thiersch "lead plate and silver wire" sutures, and in this manner located outside the peritoneal cavity. The edges of the wound were closed above them. Peritoneum and muscles were sewed up separately, in layers one above the other, with catgut. The abdominal incision was about fifteen inches in length and more than fifty external sutures were necessary.

The reaction during the first three days was very slight, but then came an alarming period of intestinal obstruction, without fever or pain, but tympanitis and incessant vomiting. This ceased spontaneously, however, and the woman seemed in a fair way to recover entirely. There was no fever, the abdomen was flat, and all her functions were being normally performed. A few days after the operation, swelling of the parotid glands occurred—first the right, after a few days the left one—but that had entirely disappeared. Full antiseptic precautions were used, with salicylic spray. One ovary was removed completely, and only a very small portion of the other remained. The ligature, however was located behind it.

The sutures were removed on the eleventh and thirteenth day after the operation. At this moment —nineteen days after the operation—the patient is quite well, has had several passages without pain, but is troubled with flatulence. There seems not to be any doubt about her final recovery.

The tumor has the macroscopic and microscopic appearance of a fibromyoma.

Dr. L. A. Stimson presented

THE STOMACH, PORTION OF THE ŒSOPHAGUS, AND PORTION OF THE ANTERIOR ABDOMINAL WALL OF A PATIENT UPON WHOM HE HAD PERFORMED GASTROSTOMY.

"The patient, a man, forty-one years old, was admitted to Bellevue Hospital in the spring of 1882, suffering with chills and fever, and was soon discharged cured. He was at that time a well-nourished, hearty-looking man. In July following he noticed for the first time occasional difficulty in swallowing food. He said the food 'seemed to stick' and passed into the stomach after a moment's delay. The difficulty increased gradually, so that by the middle of August he became unable to swal-

low solid food. September 27th he was admitted again to Bellevue Hospital. He was then thin and pale, and had lost thirty pounds in weight since July 1st. His previous history is without bearing upon the case.

"Examination with the œsophageal bougie showed a slight obstruction in the œsophagus at the level of the larynx, and a second and more considerable one at the distance of 34 ctm. from the incisor teeth. The diagnosis of cancer of the œsophagus was made and the patient fed upon liquid food. The bougie was passed occasionally, the last time on October 10th. The difficulty in swallowing increased, and on October 13th the bougie failed to pass. The patient frequently regurgitated the food he tried to swallow, and on two occasions the regurgitated food was streaked with blood.

"After October 13th he was nourished exclusively by the rectum; his strength failed steadily, and he complained of weakness, hunger, and thirst.

"He came under Dr. Stimson's care October 18th, who proposed gastrostomy, but the patient refused to accept it. At that time he was able to walk abroad. Ten days afterward he asked to have the operation performed, being convinced by his rapid loss of strength that he could not long survive. During these ten days he had received from three to six times daily an enema composed of about half a pint of milk, an ounce of whiskey, some pepsin, and occasionally an egg, but the injections were very distasteful to him, and he frequently refused to have them repeated.

"His emaciation was extreme, his abdomen very much retracted. No tumor could be felt in the epigastrium; the area of hepatic dulness was small, not extending to the left of the median line, and the free border of the liver could be felt just below the ribs. He complained of constant pain in the abdomen, and during the last three days received about twenty-five minims of Magendie's solution of morphine subcutaneously during the day. He was still unable to swallow, but occasionally took a teaspoonful of water, which was regurgitated, together with some thick opaque mucus.

"The operation was done October 30th. The patient was etherized and the abdomen exposed, the limbs and chest being kept well covered. The usual antiseptic precautions, exclusive of the spray, were taken.

"An incision was begun about two inches below the xiphoid cartilage and a finger-breadth on the inner side of the left costal cartilages, and carried downward and outward for two inches parallel to the latter. The different layers were successively recognized and divided, and the peritoneum exposed. Only one bleeding point needed to be secured.

"It had been anticipated that the opening of the abdominal cavity would be followed by the immediate entry of a considerable quantity of air, in consequence of the tendency of the strongly retracted anterior abdominal wall to rise to the level of the ribs in the epigastric triangle, and this expectation had been much strengthened by the behavior of the different layers as they were in turn divided. As each was cut it drew away from the underlying one, so that when the peritoneum was reached it lay at the bottom of a cavity that was fully one and one-half inches in depth; through the peritoneum and in contact with it the stomach could be seen moving slightly up and down as the patient breathed. An incision half an inch long was made in the peritoneum, and although pressure was made with the hand between the umbilicus and the wound, air entered with a whistling sound, and the abdominal wall drew away from the stomach for a distance of about half an inch. The stomach was caught with dressing forceps and drawn forward through the incision, filling the opening in the peritoneum completely. The peritoneum was then drawn up and stitched to the skin on each side, and the stomach fastened on each side by two sutures which were passed for three-fourths of an inch through its wall between the peritoneum and mucosa and did not enter its cavity. The upper and lower portions of the abdominal incision were closed with sutures and two hare-lip pins; and finally the portion of the stomach which projected through the wound was transfixed with two long pins as a precaution, to relieve the strain on the sutures and to prevent its withdrawal into the cavity in case the sutures should tear out. The stomach was not opened.

"The wound was dressed with carbolized gauze and a thick layer of borated cotton, and the patient replaced in bed. His pulse was rapid, and his hands cold; he gradually rallied, the pulse improved in quality; the temperature rose somewhat above the normal, and he came quietly out of the ether. Six hours later he grew dull and weak, the pulse became feebler, and he died unconscious ten hours after the operation.

"The specimen shows the stomach still fastened in the abdominal wound. It has been opened along the lesser curvature, and it can be seen that the sutures do not enter the cavity of the organ. The attached portion is on the anterior surface, midway between the greater and lesser curvatures, and distant two inches from the pylorus and four inches from the cardiac orifice. The stomach was entirely empty, but not contracted, measuring when fresh nearly twelve inches around its broadest part.

"Only the lower half of the œsophagus has been removed. The neoplasm begins within an inch of the cardiac orifice, and extends upward about three inches. It has narrowed the calibre of the tube at the lower part, so that it will admit only a rod about one-eighth of an inch in diameter. At the upper part the narrowing is not so great, and the mucosa is thrown into longitudinal folds and tabs, which seem to have acted like valves to oppose the passage of instruments or food. The growth is an epithelial cancer, beginning in and involving almost exclusively the mucosa. Six small cancerous nodules were found in the liver.

"Albert, whose personal experience in the operation is far larger than that of any other surgeon (he did the operation ten times in the year 1881), says, in the 'Real Encyclopedie,' vol. v., p. 565, that it was first done by Sédillot in November, 1849, and that, including the year 1879, it had been done fifty-three times—ten times for cicatricial contraction of the œsophagus, and forty-three times for cancerous obstruction. The first twenty-eight cases were unsuccessful, every patient dying promptly; the twenty-ninth was done by Sidney Jones, and the patient lived forty days.

"A rather hasty search through the periodical literature of 1880, 1881, and 1882 has enabled me to increase the list to a total of ninety-three cases, in eighteen of which the contraction was cicatricial, the result of swallowing an acid or a caustic alkali, and in seventy-five the obstruction was cancerous, the growth occupying the tonsil in one case, the œsophagus in the others.

"Of the eighteen cicatricial cases, eight died in

consequence of the operation, and ten recovered from it.

"Of the seventy-five cancerous cases, twenty lived for periods varying from three weeks to eight months, two or three of them being still alive at the date of the last report; fifty-four died within three weeks after the operation, and the great majority within the first week.

"The causes of death were peritonitis, exhaustion, the shock of the operation, and the progress of the disease, especially in the thoracic organs.

"In several of the successful cases it is noted that the obstruction was not complete, and that the patient was nourished by the mouth previous to the operation.

"The operative methods which seem to be in most favor at present, and to be most worthy of adoption, are, first, to make the incision parallel and close to the free border of the costal cartilages on the left side; second, to secure the stomach in the wound by from four to eight silk sutures, passed between the muscular and mucous coats of the stomach and including a broad layer of the parietal peritoneum. In at least one case fatal peritonitis was caused by the escape of the contents of the stomach alongside stitches that included the entire thickness of its wall. In two or three cases suppuration has taken place in the abdominal wall beside the wound, and I think it is prudent, therefore, to provide for drainage from the divided muscular planes. This can be done by drawing out the divided edge of the parietal peritoneum and attaching to the skin all around, after having placed a drain between its outer surface and the cut walls. This stitching of the parietal peritoneum to the skin gives a broad surface of peritoneal contact with the stomach. It has been employed in some cases of inguinal colotomy, as the Society will remember.

"An additional precaution was to pass two long pins or two stout silk ligatures through the portion of stomach that projects through the wound, for the purpose (in the case of ligatures) of facilitating the subsequent incision into the stomach, and also (in the case of the pins) as a precaution against the tearing out of the stitches and the return of the stomach into the abdominal cavity. This latter accident happened in one of Sédillot's cases, and one stitch tore out in one of Bryant's cases.

"In most of the later operations the stomach has not been opened until after the lapse of several days, from three to eight; and it is perhaps worthy of mention that in one case in which it was opened on the eighth day, peritonitis developed shortly afterward and proved fatal. In my own case it was my intention to open the stomach on the day following the operation, in order to feed the patient, with the expectation that it would be possible to prevent the escape of its contents, by placing a figure-of-8 ligature about the transfixing pins. It is in these more recent cases in which the opening of the stomach has been made a second operation, to be done several days after the first, that the proportion of successes has been largest.

"In several cases it is mentioned that the portion of the stomach secured in the wound was near the pylorus, and in another case I should pass the forceps to the left instead of directly backward, so as to seize the organ nearer its centre.

"Finally, the influence of the enfeebled condition produced by starvation and cachexia upon the result is so marked that if the operation is to be done at all it should be done as early as is practicable. The almost identical operation for the removal of a foreign body from the stomach, gastrotomy, has been almost uniformly successful, and this great difference in the result must be due to the difference in the strength of the patients."

RAPID LITHOTRITY.

Dr. James L. Little presented fragments of a calculus, weighing ninety-five grains, removed by rapid lithotrity. They were obtained from the bladder of a man, fifty-five years of age, who had suffered from symptoms of stone for two and a half years. During the past year he had several attacks of retention, compelling him to use a catheter. Last June he passed several fragments of stone. Before the operation he passed his urine every half hour. It contained mucus and blood. An examination showed the presence of a calculus.

On November 10th, Dr. Little performed litholapaxy. The stone was seized without difficulty and fragments removed with evacuating catheter. Considerable trouble was, however, experienced in removing the last fragment. It could be heard clicking against the catheter, but would not pass through. Continuing the suction with the aspiratory bag, while the catheter was being removed from the bladder, the fragment was found held fast in the opening at the end of the instrument. The operation lasted about forty-five minutes. The patient was doing well. No unfavorable symptoms followed the operation.

The Society then proceeded to the transaction of miscellaneous business.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, November 7, 1882.

E. C. Spitzka, M.D., President, in the Chair.

Dr. E. C. Spitzka showed sections of Guiteau's brain, and made some remarks about "artefacts." He claimed that he had discovered and announced the true character of these artefacts about five years ago. They were produced by the action of alcohol upon brain-tissue, and were probably largely composed of leucin. They could be produced artificially in healthy brains. They had often been considered colloidal in nature and had been described as pathological lesions. This was particularly the case in certain communications by Dr. Kempster and by Dr. John P. Gray in the *American Journal of Insanity*. These bodies varied in size and shape; they might be even visible to the naked eye. They did not stain unless the tissue was overstained, when they stained deeper than the surrounding parts.

The speaker thought that great injustice had been done him by those who had examined Guiteau's brain in not recognizing his work. He had seen sections of Guiteau's brain loaned him by Dr. Morton and they all showed signs of disease.

Dr. C. L. Dana thought that he was hardly to be blamed for not being acquainted with all of Dr. Spitzka's communications, especially since none of the recent writers had noticed them. That the artefacts or vacuoles were artificial and produced by the action of alcohol was one of the first things that had been suggested to him and was a thing he thought generally known among competent microscopists.

With regard to the sections of Guiteau's brain, he had admitted chronic disease of the blood-vessels. In the sections which he had examined and

reported upon, however, there were in his opinion no morbid changes that could be considered as proving anything regarding Guiteau's mental condition. In this opinion he was sustained by a number of pathologists equally competent with Dr. Spitzka, to whom he had submitted his sections.

Dr. Spitzka thought it unjust when there was so much said about the lack of original work by Americans that his should not have been acknowledged. The specimens of Guiteau's brain which he had examined showed all the signs of disease described in the official report. He intimated that Dr. Dana's report in The Medical Record was "fixed" to make it correspond with the editorial views expressed in that journal.

Dr. Wm. A. Hammond read a paper on the

SEAT OF INSTINCT IN MAN,

claiming that its seat was in the medulla oblongata. Dr. Hammond arrived at his conclusions from a study of the history of acephalic monsters and from a series of experiments which he and others had made upon frogs and reptiles. He said that he had found very little written about this subject. In acephalic monsters the capacity for suckling and other instinctive acts was observed, provided the medulla was present. In monsters in which there was no brain or cord, no such actions took place. In frogs, the removal of the cerebral and cerebellar lobes did not interfere with instinctive acts, such as swimming, the sexual act, etc. Neither did removal of the spinal cord.

In the discussion which followed the subject turned upon the nature rather than the seat of instinct. There was a general expression of disagreement in Dr. Hammond's conclusions, however.

Malaria in Italy.—In Italy has been published the first part of a large map designed to illustrate the prevalence of malaria in that country. It is shown by this map that out of 60 Italian provinces only 6 are entirely exempt from the disease. These are Genoa, Porto Maurizio, Florence, Massa and Carrara, Pesaro, and Piacenza. Two principal causes of the scourge are the marshes produced by the excavations of the railways, leaving a want of a good outflow for the water, and the destruction of the forests. It is is said that there are in the Italian hospitals every year some 12,000 patients suffering from malaria, and that out of the 2,200 men employed on the Sicilian railway alone 1,455 have been attacked in a single year.

A Curious Monster.—M. Paul Bert describes a living monster, five years old, seen by him at Geneva. It has two heads, two thoraces, four arms, one abdomen, and one pair of limbs. The fusion begins at the umbilicus. It has two stomachs, and probably two duodenums, one anus and one set of genital organs, the sex being male.

Remarkably enough though anatomically the same below, they are physiologically independent, each having control of the leg on his own side. The monster can walk, however. M. Bert states that the two faces are much alike. They are intelligent, and speak German, French, and Italian. Their health is good, they are mentally independent; eat and sleep alternately. The food which one takes does not satisfy the hunger of the other. The need of urinating and defecation is felt simultaneously. One has had a fever without the other being ill.

Correspondence.

THE PATHOLOGY OF TUBERCLE.

To the Editor of The Medical Record.

Sir: The article of Dr. Satterthwaite, in The Record of October 28th, is a fine *résumé* of the subject, and is praiseworthy for its freedom from bias and for the thoroughness with which the literature of the subject has been abstracted. The author, however, makes no mention of the noteworthy labor performed by Dr. O. C. Robinson, in the Pathological Laboratory of the University of Pennsylvania, under the direction of Dr. H. F. Formad, and reported in the *Philadelphia Medical Times* for December 3, 1881. These experiments, one hundred and nine in all, were carefully conducted and extended over a period of two years. The conclusion arrived at was unfavorable to the specific origin of the disease. I only wish to add that in any discussion of the question of the contagiousness of phthisis we should remember that we have already a well-defined etiology for the disease. There is scarcely a case of consumption where the predisposing cause or causes cannot be made out. The removal of the cause, if possible, is, of course, the first step in the treatment, and is often followed by the improvement or recovery of the case.

It was formerly supposed that the *Torula cerevisiæ* was capable of transforming starch into alcohol, water, and carbonic acid, but it is now known that the starch must be changed to glucose before the fungus can develop. Now, is it not true that the inroad of the *Bacillus tuberculosis* (admitting its existence) is *subsequent* to pathological changes produced by the disease. It is said that Koch admits that the parasite must have a suitable soil. Does he mean that the soil must be a morbid one?

A. H. Phinney.

Howell, Mich., November 3d.

INEBRIETY, A VICE OR DISEASE.

To the Editor of The Medical Record.

Sir: Dr. Crothers, in a recent paper on this subject, takes strong grounds against the theory of vice and sin being urged as a reason for the first use of spirits in obscure and gradually developed cases, and believes that inebriety is a disease, for which the victim is in no way responsible. The doctor has no doubt made an elaborate study of the subject, but has, I think, arrived at wrong conclusions. Granted that the continued use of alcohol will produce such physical and mental changes as will eventuate in a diseased condition, I still do not believe that the individual, before taking his first glass, is controlled by a disease which renders his not taking it out of his power, if within his reach. Dr. Crothers thinks this is a pernicious doctrine, but it seems to me a reasonable one, and will bear the test of criticism. The advocate of the vice doctrine may with propriety point to the fact, manifest every day in the streets of our towns and villages, that the class of young men who are drawn into the saloons are, as a rule, those who from childhood have not been subjected to proper religious training, who have been allowed to travel the streets unchecked, and to mingle with rough associates unrestrained. They go into the saloon with these associates

and take their first drink for precisely the same reason that they take their first cigar, or their first chew of tobacco, or first say "damn it." It is the chronic loafer, the young man of loose morals, above all, the young man who has grown from childhood with the inside of the saloon as familiar to his eyes as the inside of home; with the vile oath and ribald jest of the drunken more familiar to his ears than ever was the voice of prayer from the lips of his father—it is he who has added to his other accomplishments that of inebriety. The advocates of this pernicious doctrine might also allude to the no less palpable fact that the great majority of inebriates are found in our towns and cities, where saloon influences are prominent, while the greater part of our total population is distributed through the rural districts.

Given a community in which drinking-places are unknown and inebriety will be equally unknown. Given a locality in which whiskey selling is a recognized business, and we will find that the class called regular tipplers will be a numerous one, while the number of habitual drunkards will be increased in direct proportion. I call to mind a community in my own vicinity which, until within a few years, was inhabited by a native-born population, sober, industrious, religious. This population has been gradually supplanted through emigration and immigration by German residents almost entirely. Two saloons have been established, though it is only a country cross-road, and I am certain there is scarcely a man or woman, old or young, in that vicinity, comprising a population of four or five hundred, who is not a frequenter of those saloons, drinking from a single glass to beastly drunkenness. Is it not a little singular that in this case the disease should be so much more obnoxious to one class of people than to the other? And is it possible that this whole community, from the least to the greatest, is afflicted with disease, rendering them irresponsible for their acts in this respect? The advocates of this doctrine might, further, refer to the fact that drunkards—hundreds of them—are reformed by the various temperance organizations, and that a more numerous class are saved from their first drink by the good offices of these societies. The good work of these organizations is too well known to be disputed, to say nothing of the vaster influence exerted by the church of God in its various branches. Cases of disease are not cured, to any great extent, in these agnostic days, by persuasion, by the power of will, or by religious faith; hence we must conclude that those who are saved by the means to which I have alluded were not the subjects of disease, but of an appetite (I hope Dr. C. will pardon the word) which they were undoubtedly responsible for having formed, and which they had power to overcome. Another fact to which I will refer, and which I think is pregnant with proof of the truth of our position, is this: Years ago, before the subject of temperance had been agitated to any great extent, the clergy of our churches, to say nothing of the laity, were habitual drinkers of spirits; that is to say, they kept wine and other liquors in their cellars and drank it with their friends as occasion might require. The common use of strong drinks was a habit with all classes of people in the olden days.

With the last twenty or twenty-five years of active temperance work, we have seen wine-parties banished from the tables of the clergy and from every Christian home; we have seen the practice of drinking ardent spirits, instead of being indulged in by upright and honorable people in the broad light of day, relegated in great measure to the night-time—and as if this were not enough, further closed in by screens and darkened windows. What has brought about this change? Will Dr. Crothers say that the disease is being eradicated, and will he admit that the people of the church and those who possess the higher moral nature are first cured? and will he further say that this has been accomplished by a persistent agitation of the subject of the evils of drunkenness? Allowing me to substitute the word "vice" for "disease," I think he ought, at least, to say just that. Dr. C. alludes to cases in point, in which he claims that great shocks to the nervous system, caused by grief at some great loss or affection, has eventuated in habitual inebriety, as the result of physical changes over which the victim has no control. I can readily conceive of some great grief, such as the sudden loss of family or of fortune, from which we might hope to find relief in forgetfulness, or in the substitution of a state of mind opposite to that in which our grief has left us. For this we turn, if our will is not strong, to one of the intoxicants—to tobacco, perhaps, if we are not already habituated to its use, or to the stronger but more dangerous opium or alcohol. It is true that many cases of inebriation begin in this way, and I will not deny that it is possible for injury of some sort to be productive of a diseased condition leading to this result; but such cases as are cited by Dr. Crothers are so rare as to be insignificant when compared with the vast number of those who took their first glass of spirits because such action was compatible with their surroundings, and with the influences under which they had lived. The doctor well says: "If, in ten cases of a similar disease, the physical origin can be traced in fire, it is most resonable to suppose that a similar physical causation exists in the others, although not clearly traceable;" but he ought to remember that no such proportion exists in regard to the causation of inebriety. Where Dr. C. can find one case in which he can trace the cause to physical origin, I can find fifty, or an indefinite number of cases, in which I can trace the habit to deficient moral rectitude, or lack of moral force of character. And I will add further, that the great majority of inebriates are those whose religious training has been *nil*.

J. B. Stair, M.D.

Spring Green, Wis., November 23, 1882.

Foreign Medical Men in Paris.—Foreign medical men are everywhere cordially received in Paris. All the hospitals and clinics are open to them free of charge, and on the presentation of professional cards special attention is invariably afforded. Even the histological laboratories, with their advantages, are also at their service. If a stranger wishes to work in the histological laboratory of the College of France, under Bauvier, he has only to present his card as physician, enter his name, and if all the tables are not occupied, he can begin work at once, provided he has with him his microscope. It is, however, absolutely essential to understand French. In the German and Austrian hospitals nearly every one speaks more or less English, but that is by no means the case in France. It must, however, be readily conceded that a person not understanding the language of the hospital is at a decided disadvantage. —*Cor. Chicago Medical Journal and Examiner.*

New Instruments.

A SUBSTITUTE FOR THE WRIST AND ANKLE BAND.

To the Editor of The Medical Record.

Dear Sir: My friend, Dr. T. A. Emmet, on his return from his summer vacation in Europe, brought me an apparatus which is so admirably adapted to the purpose intended, that I deem it worthy of notice in your Journal.

Mr. P. H. Schmidt, instrument-maker, No. 1311 Broadway, has made several of them, with such improvements as suggested themselves to me.

It consists of a contrivance for securing the patient in the back position for all operations on the perinæum, vagina, uterus, or rectum; also for perineal urethrotomy and stone in the bladder.

The best apparatus which we have had for this purpose, up to the present time, is the wrist and ankle band, which is both awkward and painful.

The accompanying wood-cut explains itself. It consists of a solid iron rod, sliding within a hollow one, for the purpose of rendering it longer or shorter. At each end of the rod, is a padded leather strap, which is to be buckled around the leg just below the knee, a long padded strap is then fastened to one of the buckles near the end of the connecting rod, carried around behind the patient's neck and fastened to the buckle at the other end of the rod.

I have used the apparatus several times in operations for stone, perineal section, hemorrhoids, ruptured perinæum, etc., and find it all that I could wish. It enables me to dispense with one or two assistants, as the one giving ether can also keep the patient from rolling to either side, by simply grasping the connecting bar with one hand, leaving the other free.

It also secures a thorough stretching of the perinæum, lifts the legs and feet completely out of the way, and enables you to fetch the nates well down beyond the edge of the table, which is often very desirable.

Geo. A. Peters, M.D.

New York.

Professor Nothnagel delivered his opening address, October 16th, on assuming the chair of internal medicine in Vienna. He discussed the subject of clinical instruction. He was listened to by a crowded audience.

Obituary.

JOHN P. P. WHITE, M.D.,

new york.

Dr. John Payson Phillips White died in this city on the morning of December 3d, of peritonitis and cholæmia, the result of obstruction of the common duct of the liver and rupture of the gall-bladder. Dr. White was born in Northampton, Mass., July 4, 1838, and was graduated from Williams College. He studied medicine with Dr. John J. Crane, of this city, with whom he became associated subsequently, and graduated from the College of Physicians and Surgeons. At the breaking out of the war he was an interne at Bellevue Hospital, but left to join Hawkins' Zouaves as Assistant Surgeon, and afterward rose to be Brigade Surgeon. Dr. White was stationed in New York during the famous riot of 1863, and narrowly escaped being hung by the mob. He was rescued, however, by a former patient, and secreted himself in the house of a professional friend for some time.

Dr. White was connected with Bellevue Hospital as Visiting Physician, and was a member of the County Medical Society and Academy of Medicine. He was a man of singular purity of character, whose gentleness and amiability made him popular with a great number of people, and those of his profession with whom he came in contact speedily learned to love him. His cheerful face and kindly ways gained for him a hearty welcome everywhere, and his many quiet acts of unostentatious charity called forth the thankful prayers of the sick and needy.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 25, 1882, *to December* 2, 1882.

Powell, J. L., Assistant Surgeon. Relieved from temporary duty as Attending Surgeon at Headquarters Department of Texas, ordered to proceed to Fort Davis, Texas, and report to the commanding officer for duty. S. O. 129, Department of Texas, November 23, 1882.

Gray, William W., First Lieutenant and Assistant Surgeon. The leave of absence granted on Surgeon's certificate of disability, October 31, 1882, Department of the South, is extended five months on Surgeon's certificate of disability. S. O. 278, par. 3, A. G. O., November 29, 1882.

Luxation of the Jaw.—The late Professor Gibson used to tell a good anecdote in regard to luxation of the jaw. "An old and quite wealthy man came into the office of a surgeon, with a luxation of the jaw, and made motions to have it reduced. The jaw was reduced, and on being asked the fee the doctor mentioned an amount which the man regarded as entirely too much, and insisted on its being reduced one-half. The surgeon said no more about the fee, but began to talk, and pretty soon told a laughable story. The man began to laugh heartily, and out went the jaw. He again made signs to have it reduced, but the doctor said, 'When you pay down my fee, I will put in your jaw.'"

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 2, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Nov. 25, 1882.	0	9	32	3	9	51	0	0
Dec. 2, 1882.	0	8	26	1	32	51	0	0

The Post-Graduate Schools of this city are well satisfied with their success thus far.

Typhoid Fever and Malarial Waves and their Relation.—In a recent monthly report the Secretary of the State Board of Health of Connecticut, gives statistics showing an increase in typhoid fever, and comments upon its relation to malaria as follows:

"This return of typhoid fever to prominence, and its steady increase in frequency for the last three years, is apparently a part of an extensive and comprehensive movement. As the epidemic of malaria was ushered in by a decrease, and in places almost, if not quite, a total disappearance of typhoid, this return of typhoid fever to its former importance and relative frequency is an intimation of the decrease and disappearance of malaria. The tendency toward typhoid fever commenced several years ago, and has steadily grown stronger each year, as shown by the increased prevalence, tendency to unusual frequency and severity, and the increase each year of deaths from this cause. As the decrease in the frequency of typhoid preceded the malarial wave, so its increase precedes the entire disappearance of malaria, or at least gives us some ground for hope that such a disappearance will take place. This disappearance of epidemics of malarial fever on a large scale has often been followed by an unusual prevalence of typhoid fever or an extensive epidemic. The epidemics of malarial fever of 1807 and 1824, which are stated to have extended over all Europe, were followed by typhoid fever." The writer thinks that the spread of malarial fevers over Connecticut, Massachusetts, and Rhode Island has ceased.

A Royal Surgeon.—If only we could all treat our patients as the Prince of Wales did! Recently, when out shooting, one of the servants was slightly injured by a chance shot, and howled a little. The Prince came up and said, "My friend, I am a doctor." He gave the wounded man a drink from his flask, and slipped a hundred francs into his hand. The man got well without antiseptic precautions.

Asthma Cigarettes.—Impregnate well-nitred tobacco with an alcoholic fluid extract of grindelia; let dry and use in cigarettes. Owing to the nitre they will continue to glow and develop smoke.

The Retirement of Dr. Holmes.—Dr. Oliver Wendell Holmes delivered his farewell lecture before the students of Harvard Medical College on November 28th. The ceremony was a most interesting one. The amphitheatre was packed, there being many physicians and old students in the audience. The entrance of the doctor was marked by the rising of the students, and as their applause ceased one of them presented him in behalf of his last class with a beautiful loving-cup, inscribed with a quotation from one of his own poems.

Beginning his address, Dr. Holmes said there were three times in a man's life when he might properly consider himself the centre of attraction—at his christening, at his marriage, and at his own funeral. This, the beginning of his thirty-sixth course of lectures on anatomy, was the end of his connection with the school. For about half of this time he had also taught physiology, but with the growth of the science he had gladly given it over to form a new department. It was a good thing for a college to get rid of her old men. Their ideas were antiquated and the college had better let them go. He had held his office so long because he had taught a subject which could never become antiquated. In his lifetime it had received very few important additions. He had begun the study of law in his youth as an experiment, but for various reasons had turned his attention to medicine. While in the Law School he had engaged with some friends in publishing a paper, and for the first time saw himself in print. From the printer's type he had contracted the disease of authors—head-poisoning—which he had never quite got rid of. The doctor finished with some practical remarks on the way in which the science was tending. Dr. Holmes has been made Emeritus Professor of Anatomy in the college.

Mr. Stuart Cumberland's Experiments in Muscle-Reading. — A number of prominent medical gentlemen, clergymen, and others, assembled in a parlor of the Everett House last week to witness the performances of Mr. Stuart Chamberlain, the mind-reader. This gentleman is an Englishman, who has given exhibitions of his peculiar powers before scientific audiences in his own country. He showed last week that he had quite remarkable gifts in his particular line. The feats which he performed were those usually known as mind-reading or muscle-reading. They were first shown in this country several years ago by "Brown, the mind-reader," and subsequently by others. The physiological explanation of the tricks was first made in this country also, and altogether Mr. Chamberlain comes over to tell us things which are rather stale here. The extreme delicacy of his touch-, pressure-, and muscular-sense, however, is unique and interesting.

One example of it was the following: Mr. Chamberlain, being blindfolded, took Mr. Beecher's hand and led him at once to a small spot on the wall, previously marked, upon which he almost immediately placed his finger; he then took the distinguished clergyman to another spot, which had also been marked, and placed his finger upon it. Then taking Dr. Ball's hand he at once found a small object which that gentleman had ingeniously hidden in his shoe. The especially interesting part of Mr. Chamberlain's performances was the fineness of his perceptive powers, by which he was able to pick out small objects, even placing his hand upon a single pin selected out of a number of others, and thought of by the person experimented upon.

The Payment of Garfield's Physicians.—The following are the claims allowed by the Garfield Board of Audit: Dr. D. W. Bliss, $6,500; Dr. D. Hayes Agnew, $5,000; Dr. Frank H. Hamilton, $5,000; Dr. Robert Reyburn, $4,000; Dr. Silas A. Boynton, $4,000; Dr. Susan A. Edson, $3,000; to-

tal, $27,500. The total amount appropriated to pay claims against the Garfield estate was $57,500. The allowances for the physicians are $8,000 less than the amount appropriated. We believe it will be the universal sentiment of the medical profession that the sums appropriated for the physicians are unjustly small.

GRAVE-ROBBING.—During the past week a sensation was caused in Philadelphia by the arrest of an organized gang of grave-robbers that has for nearly twenty years been despoiling Lebanon Cemetery. The bodies were sold for dissection.

SUICIDE AND THE NEW PENAL CODE.—On Monday a poor fellow, who for a long time had been brooding over severe troubles, attempted to commit suicide. He failed, was taken to a police station, and from there into court, where he learned that under the new Penal Code attempt at suicide is a felony which may be punished to the extent of two years' imprisonment, or a fine of one thousand dollars, or both.

THE FOLLOWING DEATHS FROM APPLICATIONS OF CARBOLIC ACID are reported: A man who had his hair clipped off was painted with carbolic acid over two-thirds of the head for some disease. He complained immediately about pains and dizziness in the head, became unconscious after a few minutes, and died shortly afterward. Three girls were painted for scabies all over the body with impure carbolic acid, and they became unconscious after a few minutes. Two carpenters had used carbolic acid against scabies; one of them cried suddenly, became intoxicated, and died after a few minutes; the other became unconscious, but he recovered. A child of fourteen months fell upon a bottle filled with a strong solution of carbolic acid; the bottle broke, and the child was covered with the acid. Death followed a few minutes afterward. A midwife applied a small compress soaked with carbolic acid to a suppurating spot on a little child, which died after two hours. Experiments on animals have proved that carbolic acid brought in contact with the bowels or peritoneum will produce shock and collapse.

COMPLETE DISLOCATION OF RADIUS AND ULNA OUTWARD.—Dr. S. R. Towne, of Enfield, Mass., writes: "An article in the *Medical News*, of Philadelphia, date of September 30, 1882, on 'Complete Outward Dislocation of Radius and Ulna,' recalls to my mind a case reported by me in the number of May 8, 1880, p. 525, of THE MEDICAL RECORD. The case I know to have been a similar one, viz., complete outward dislocation of radius and ulna."

THE LATEST SPHÆRO-BACTERIUM.—The *Chicago Medical Journal and Examiner* publishes the following: Drs. Daniel R. Brower and Lester Curtis were in attendance upon a lad affected with perfectly typical tetanus, resulting from a wound in his hand inflicted by the explosion of a toy pistol. They determined to examine his blood with the microscope, and, having done this, discovered that it was swarming with organisms precisely similar to the sphæro-bacteria recognized in the ill-conditioned pus removed from an abscess communicating with a joint. The blood of a horse affected with tetanus was then placed by them under the same objectives, and in it also similar organisms were discovered. Not content with pushing their investigations to this point, they proceeded to examine the mother of the boy who was their patient, and also another of her children; and, to their surprise, found in the blood of each an abundance of the same germs. A neighboring frog-pond was finally searched, and found to furnish masses of the same bacteria. The boy recovered from his tetanus, and was taken before a body of scientific gentlemen in this city, where his blood, still swarming with bacteria, was placed on slides and examined by a dozen or more physicians and others of unquestioned discrimination and veracity. All were able to recognize the existence of the bodies to which their attention was directed.

THE WOMAN DOCTOR IN FICTION.—The woman physician seems to be considered good "material" for modern novelists. Besides Charles Reade and a German novelist whose name we do not recall, three American writers have recently dealt with this interesting creature. The latest effort is that of Miss Elizabeth Stuart Phelps. Her book strikes one as being a very clever and earnest work, yet grotesque and even silly in its particular attempts to picture an impossible scientific, homœopathic ideal.

Our contemporary the *Boston Medical and Surgical Journal* discourses very pertinently as follows: "The differences between the novelist's doctor and the doctor's doctor are usually sufficiently striking. But what shall we say of the homœopathic female novelist's female homœopathic doctor? To many of those who are reading 'Doctor Zay' in *The Atlantic*, the 'scientific' aspects of the story must be among its most entertaining features. Yorke, the hero, having 'dislocated his ankle and concussed his brain,' falls (possibly as a symptom of the latter injury) madly in love with his doctor. She, however, being already wedded to her art, and not being bigamously disposed, gives him no encouragement. But if the suitor gets only homœopathic doses of sentiment, he receives heroic ones of scientific information. The doctor's remarks always savour of the 'shop,' the character of the shop and the quality of its product being shown as follows. Speaking of his passion, the patient says, 'It is beyond the reach of any pellet in your little case; the remedy is not in your Materia Medica.' 'That may be true; but Nature has her own unerring prescriptions. A single dose of absence—even in the first attenuation—will work a recovery which will astonish yourself, sir.' Again she says, 'I cannot demonstrate to you the futility of your hope. . . . Let us both consider this a case of aphonia and aphasia, and be done with it.' 'Explain yourself to the ignorant, my learned physician,' 'Aphonia is inability to speak——' 'Oh, yes; my Greek might have stood me for that. And aphasia is inability to hear?' 'Precisely.' 'That is a scientific reply,' said Yorke, regarding her keenly."

THE LATE DR. A. L. LOWELL, OF BROOKLYN, N. Y.—At a special meeting of the Medical Board of St. Peter's Hospital, Brooklyn, held at the Hospital, Saturday, October 14, 1882, to take action on the death of Dr. A. L. Lowell, one of the Attending Surgeons of the Hospital, it was

Resolved, That in the death of Dr. A. L. Lowell the members of the Medical Board have lost an associate who commanded their confidence and esteem in both public and private relations.

Resolved, That St. Peter's Hospital has lost the services of a skilful, efficient, and benevolent surgeon; one who practised our healing art with untiring and single-minded zeal.

Resolved, That we offer to his family our sincere sympathy in their loss, and that these resolutions be communicated to them, and published in the New York MEDICAL RECORD and the *Boston Medical and Surgical Journal*.

Original Lectures.

ON THE TREATMENT OF CROUP.[1]

By PROFESSOR DUJARDIN BEAUMETZ,

MEMBER OF THE ACADEMY OF MEDICINE; PHYSICIAN TO THE HÔPITAL ST. ANTOINE, ETC., PARIS, FRANCE.

PART I.

GENTLEMEN: In my last lecture I considered the treatment of diphtheritic angina, to-day I shall speak of the localizations of diphtheria in the respiratory tract. When this disease affects the air-passages, although the primitive cause is the same, the symptomatology is different, and new therapeutic indications arise. As you will often be called upon to render assistance in these cases, which are always grave, I have deemed it advisible to devote this entire lecture to the treatment of croup. You will fortunately be able to see, in the department of our hospital set apart for children, illustrations both of the disease and the modes of treatment which I shall here recommend.

The details into which I entered when treating of diphtheritic sore throat have made it unnecessary that I should devote much time to the origin of croup. In France we are agreed that pseudo-membranous croup is the extension of diphtheria to the larynx, and we reject altogether the possibility of an inflammatory or "catarrhal" croup, a notion which has been supported in Germany.

By the side of this pseudo-membranous diphtheritic croup, exist diseases of the larynx which offer a certain symptomatic resemblance to this latter, and are often confounded with it; I allude especially to simple laryngitis and laryngismus stridulus.

Simple laryngitis, in young children, is a grave affection, which may cause death by suffocation, and which produces symptoms quite like those of croup, except, of course, the characteristic expectoration of pseudo-membranous tube-casts. In the case of infants under two years of age, owing to the extreme difficulty of examining the throat, grave forms of simple laryngitis are often confounded with croup.

The mistake is the more easily made for the reason that croup is often croup from the first; that is to say, that while in the majority of cases diphtheria attacks first the pharynx, then the larynx, it may follow an opposite course, and affect first the respiratory passages, and then invade the mucous membrane of the pharynx.

To guide you in the diagnosis of pseudo-membranous croup, and of the grave forms of simple laryngitis, you will have only two important symptoms to take into account—of course you should first settle the question, if possible, by inspection, whether there be false membranes in the throat or windpipe: 1. In simple laryngitis, paroxysms of suffocation are not so common or so noticeable as in croup, the difficulty of breathing is constant but exacerbations are not so marked. 2. The march of croup is more sly, insidious, and progressive, the symptoms of the *début* are not generally alarming. The onset of simple laryngitis is more acute, noisy, and violent, but in the milder cases we soon see improvement. The graver cases, however, of this affection, soon manifest symptoms not at all easy to discriminate from the ordinary symptoms of membranous croup; in both we have the gradual increase of pallor and prostration, the weakening and extinction of the voice, the hoarse, barking cough, and the laryngeal whistling giving place to silence, the dyspnœa becoming more and more intense till death ends the scene.

Thus we see that in very young subjects the confusion is almost inevitable between simple laryngitis and membranous croup, but this is not prejudicial to the patient, since the same line of treatment is applicable to both cases. The prognosis, however, is different, and it is easily understood that tracheotomy gives better results in the first case than in the second.

The difficulties of diagnosis between membranous croup and laryngismus stridulus are much less great, and you will hardly fail to know the latter when you see it, if you will keep in mind the classical description. The little patient is attacked suddenly in the night with a paroxysm of suffocation. The child was in perfect health the evening before, or had only a slight cold. Respiration is obstructed and occurs with convulsive struggles and crowing inspirations. There is a sonorous cough,[1] and a peculiar hoarseness of the voice. During the paroxysms the child is in the greatest distress and asphyxia seems imminent. The family, in the utmost alarm, summon the physician. Here is an opportunity for a brilliant triumph of therapeutic skill; you can very speedily subdue this false croup by the use of two remedies, chloral and bromide of potassium. When your patient is very young, under two years of age, I advise you to employ bromide of sodium in the dose of half a gramme (7½ grains). This dose may be given in a teaspoonful of syrup of chloral;[2] the whole may be administered in a cup of warm sweetened milk, to which the yolk of an egg is added. For older children you may administer in the same vehicle the bromide of potassium, in the dose of half a gramme to a gramme (7½ to 15 grains), and you may double or even quadruple the dose of syrup of chloral.

I have felt it to be my duty to emphasize the importance of correct diagnosis, for before you undertake to treat a case of croup you ought to be sure that you have a case of croup to treat. When once you shall have recognized in your patient the symptoms of membranous laryngitis,[3] symptoms which I

[1] Translated from advance sheets by Dr. E. P. Hurd, Newburyport, Mass.

[1] [The cough is denied by some authorities, as Niemeyer. It is asserted that Laryngismus Stridulus, or False Croup, is purely a neurosis of the par vagum, unaccompanied by any catarrhal inflammation, and consequently by cough and hoarseness. This is not the French view, as the very name by which the affection is designated implies—*Laryngite Striduleuse*. The kind of "false croup" alluded to in the text is clearly of a subacute catarrhal character, and ought not to be confounded with spasm of the glottis, which is an independent affection.—TR.]

[2] [The strength of the French syrup of chloral is one gramme (fifteen grains) to the tablespoonful.—TR.]

[3] Pseudo membranous laryngitis may be such from the start (*croup d'emblée*), or be consecutive to membranous angina, or, still farther, may have been preceded by diphtheria of the bronchi or of the trachea (*croup ascendant*); it presents in its march a group of symptoms which enable us to divide the disease into three periods—exudative, dyspnœic, and asphyxial.

Croup begins often as a simple cold, by malaise, chills, some amount of prostration, diminution of the appetite, and a little fever, but the child continues to go out-doors and engages in his sports. Soon he complains of a tickling in the throat and difficulty of swallowing, and headache; the fever and anorexia increase, he grows pale and coughs, his voice is hoarse, weaker than ordinarily, harsh and discordant.

If you examine the throat at this stage, you often discover nothing but redness in spots, and swelling of the tonsils; when croup is complicated with angina, you will see rapidly developed little white, milky, opaline patches, which cover little by little the tonsils, velum palati, and the entire posterior fauces, and often reach the nasal fossæ, from which a yellowish serous liquid exudes. The submaxillary glands are engorged and tender to pressure.

The disease continues and makes progress, as it were, by bounds;

need not describe to you, and for whose full exposition I refer you to your treatises on clinical medicine and practice, you have two methods of combating this dire affection, and these are—(1) medicinal, and (2) surgical.

(1.) The medicinal methods are absolutely identical with those which I have indicated for diphtheria angina, and the difference in the localization of the disease necessitates but slight modifications in the treatment.

These modifications affect especially the mode of application of the remedy. While it is an easy matter to make applications directly to the pharynx, it is extremely difficult to medicate topically the windpipe. When treating of diseases of the lungs I pointed out to you how hard it is to make medicinal substances penetrate the air-tubes, and demonstrated how little service cold pulverizations can render. Hence, swabbing of the larynx and insufflations of powders have been recommended. All these means, so difficult of accomplishment, should be abandoned, and you should rely on the steam atomizer, whose medicated vapor moistens the upper part of the larynx, and is about the only topical agency which I advise.

Another indication to fulfil is to promote expectoration of the false membranes in the air-passages. You understand the utility and the necessity of this therapeutic measure. Unhappily we have no expectorants of real utility except the emetics,[1] which only indirectly favor expectoration; at the same time the efforts of vomiting promote the expulsion of the false membranes, and it is advantageous to avail ourselves of their aid.

In these cases three medicaments are especially recommended — ipecac, sulphate of copper, and apomorphia. Ipecac is the expectorant by far the most used; as an emetic it is the safest. Unfortunately it does not always produce vomiting, and one is obliged to have recourse to the sulphate of copper in the dose of 50 centigrammes (7 grains) in mucilage. Sulphate of copper is somewhat harsh in its action, but it may render you great service in these cases.

A priori apomorphia ought to be the best of emetics, since it is capable of employment in subcutaneous injections, which is of great advantage in the case of young children affected with sore throat, who refuse often with extreme obstinacy all the medicines which you try to give them by mouth. Apomorphia in the dose of 10 milligrammes for the adult (one-sixth grain), 5 milligrammes (one-twelfth grain) for young subjects of from eight to ten years, 2 milligrammes (one-thirtieth grain) for children of a still younger age, provokes vomiting in a few minutes after its introduction under the skin. It is, however, a medicament which very readily undergoes change, and on the other hand its action seems to be feeble in cases where hæmatosis is retarded, as in asphyxia; finally it is a toxic substance which in some cases determines symptoms of extreme gravity, as Pécholier has recently shown and as I have myself pointed out.[1] These circumstances have led to the virtual abandonment of apomorphia in the treatment of membranous croup.[2]

Besides medicated inhalations, expectorants, and emetics, besides a tonic regimen, there remains but little to be done, from a medical point of view, in the treatment of croup. These are, as you see, arms of little potency to combat so formidable a malady.

At the same time, if we lack medications of great activity, there are kinds of treatment that are dangerous, such as revulsives and blood-letting. Considering diphtheritic laryngitis as a veritable inflammation, some physicians have undertaken to combat it by antiphlogistics, and they have even applied vesicatories, or (what is worse still) leeches to the larynx and chest. This practice is to be mentioned only to be condemned; it weakens the patient, and by the denudation of the epidermis favors the production of cutaneous diphtheria. You ought then to refrain from all such measures.

Struck with the importance of keeping patulous the windpipe, Bouchat thought that one might obviate the dangers which result from the presence of false membranes by tubes introduced into the glottis. I was interne of the Hôpital St. Eugenie when the first trials of catheterization of the glottis were made by Bouchat; these first attempts did not

there are intervals of relative calm between the outbursts of pain experienced by the patient.

The cough, at first infrequent and barking, becomes harsher and hoarser, more annoying and persistent, and is finally extinguished; it is followed by a laryngo-tracheal whistling, and is often accompanied with a muco-purulent expectoration, which may contain *débris* of false membranes.

The voice weakens and becomes lost, the respiration becomes more labored and is attended with whistling râles of moderate intensity, inspiration becomes longer, slower, expiration harsher and more prolonged. Soon (and the younger the child the more rapidly) the difficulty of respiration augments and the tugging for breath appears. It is toward evening that the dyspnœa becomes the most marked, it is in the night that the paroxysms of suffocation are the most frequent.

The child may be lying calmly, though breathing more noisily than before; it is restless in its sleep, tosses about, then awakes, tries to get up, makes efforts to breathe, when suddenly, without cause or after some emotion, it is taken with suffocation; its countenance is pale, anxious, then becomes of a livid purple, cold like the lips; the agitation is extreme, the efforts of inspiration are violent, the alæ nasi dilate, the veins are engorged, the child is on the point of suffocating, when there is a calm. The paroxysm lasts for an indefinite period, and is repeated several times during the day and night. Some children have no paroxysms of suffocation, but suffer simply from a slow and progressive dyspnœa. False membranes are often coughed up after these attacks; this affords a momentary relief. The tugging for breath increases, and all the muscles of forced inspiration are brought into exercise; the epigastric hollow and the hollow above the sternum are very prominent in consequence of the extraordinary action of the respiratory muscles.

The asphyxia progressing, the little patient becomes more calm, is lethargic, his countenance is purple, he is covered with perspiration, the cutaneous reflexes are abolished, his pulse is small and irregular, and he passes off in a coma or in an attack of convulsions. In the course of the disease the febrile state is quite well marked, and varies according to the period, the gravity of the disease and the complications. The temperature oscillates between 38° and 38.5° (100° and 101° F.), may go as high as 39° (102° F.), or even 39.5° (103° F.), but toward the end of the period of asphyxia it falls; the pulse is accelerated, and is often intermittent; rises often to 120, 140, 160, and even higher.

Eruptions sometimes appear on the person of the patient, and petechial extravasations. In some cases albumen appears in the urine; this is always of evil augury.

Auscultation gives few results; you may detect a laryngo-tracheal whistling and an enfeebling of the vesicular murmur more and more marked as the disease advances; auscultation of the larynx sometimes enables you to hear a *bruit de soupape* [resembling the flapping of an air-valve] indicating the presence of a false membrane floating in the air-tube.

[1] Fleischmann has studied the therapeutic value of emetics in croup. Traube pretended that in the effort of vomiting the opening of the glottis dilates, but Luttich has shown that this is an error, and that the occlusion of the glottis is a constant fact during the act of vomiting. Vomiting favors expectoration, by reflex action. The sole action of emetics, according to Fleischmann, is to unload the peripheral vessels. Employed alone, medication by emetics rarely gives good results; from 1863 to 1873, thirty-seven infants were treated by this method alone, and all died but three (Fleischmann: De l'Action thérapeutique des vomitifs dans le Croup. Rev. Méd. Chirurgical, June, 1875, p. 403).

[1] Pécholier: Empoisonnement avec l'Apomorphine (Bull. de Thér., 15 Mai, 1882). Dujardin Beaumetz: Des Dangers de l'Apomorphine (Soc. de Thér., 1874).

[2] Apomorphine is a derivative of morphine, from which it differs in having one less equivalent of water. It is obtained by heating, in tightly sealed tubes, morphia with excess of Hcl. Introduced under the skin in the dose of one-sixth of a grain in the adult, it speedily causes vomiting. Quehl has shown that vomiting is produced by an irritant effect on the pneumogastrics. Mosler has maintained that in five or six days a solution of apomorphia becomes toxic. Chouppe (Sur l'Apomorphine, Gaz. Heb., December, 1874) has indicated the accidents on the part of the heart which may follow injections of this alkaloid. Dujardin Beaumetz has pointed out the same danger. Finally, Pécholier has recently experienced in himself the most alarming respiratory syncope after a hypodermic of apomorphine.

seem very encouraging, and the method never became general. This practice has lately been revived by Von Huttenbrenner, with, however, no better success.

(2.) When, in consequence of the progress of the disease, and the failure of internal medication, you find yourself powerless to prevent the more and more frequent return of the suffocative paroxysms, and the gradual progressive asphyxia which results, it is your duty to intervene surgically, and perform tracheotomy.[1]

It was a grand and brilliant idea which led the surgeon boldly to open the trachea when the larynx was obstructed, that the patient might be enabled to breathe. If tracheotomy has been slow to obtain a place in the domain of daily practice, it is because it has been found that something is necessary besides cutting the trachea; the tracheal incision must be kept well open by special means, if the respiratory function is to be materially aided by the operation. Therefore tracheotomy, practised as it has been, infrequently from the earliest times, never took rank and title among the resources of our profession, till Bretonneau, and especially Trousseau, by their manual dexterity, instrumental apparatus, and consecutive dressings, gave method and exactness to the technics of the operation.

I am going to venture somewhat outside of my province as a teacher of therapeutics, and enter into the details of tracheotomy. This is an operation which, like that for empyema, belongs almost as much to medicine as to surgery. In fact, here in Paris we see it performed quite as often by physicians as by surgeons. Moreover, it is an operation of urgency which results from a disease that appertains to medicine, and which you are likely to be called upon to perform more than once in your lifetime; it is therefore well that you should have all the details in your mind.

Tracheotomy comprehends three steps: first, the opening of the air-tube; second, the introduction of a tracheal canula to keep patulous the opening; third, the subsequent dressings. Let us examine each one of these steps.

From the point of view of the opening to be made, the various operative procedures which are recommended may be arranged in several distinct classes. This division is based on the relative rapidity with which the operation is performed, or on the place where the opening is to be made. The question of place comprises the choice between laryngotomy, tracheotomy, and crico-tracheotomy; that of relative rapidity includes the rapid, slow, and mixed methods.

[1] The first surgeon of antiquity who is known to have practised tracheotomy was Antellus, cited by Paul of Egina. He opened the trachea by a transverse incision below the third or fourth ring, and recommended to divide not the cartilage but the connecting membrane.

In the sixteenth century (1546) Antonio Masa Branavalo, physician to the Duke of Ferrara, performed tracheotomy successfully in a case of suffocative angina.

In 1660 Casserio gave a very complete description of tracheotomy, and of the manual procedures, but down to 1765, epoch when Home gave the first description of croup, the operation had been performed for suffocative anginas, and all affections producing asphyxia, without being particularly directed against croup. Home was the first to advise it in this disease.

In 1782 John André, of London, practised it for the first time in croup. The operation was afterward resorted to only in exceptional cases, and at the first great Medical Congress in 1808, every voice but one (that of Caron) was against tracheotomy in the treatment of croup.

In 1814, Thomas Chevalier published a report of a case of croup cured by tracheotomy. Then came Bretonneau, who first pointed out the necessity, in order that favorable results from the operation might be obtained, of introducing through the tracheal wound canulas of considerable size; heretofore very small tubes had been used. Trousseau followed and popularized the method of his master, and ever since tracheotomy has been an approved method of treatment.

The rapid methods are the most seductive. To penetrate the trachea at once and in a few seconds to place a canula in the respiratory passages seems to be the method the most applicable in such cases, since it removes with extreme rapidity the obstacles which oppose respiration, and does away with that painful and difficult period of immobility demanded by the other procedure.

There are three methods of rapid tracheotomy—the one originated with my regretted master, Chassaignac, the other with Bourdillat, the third with my colleague and friend, St. Germain.

Chassaignac seized the cricoid cartilage with a tenaculum furnished with a groove, serving to guide a bistoury with which he cut at one sweep the three first rings of the trachea; then this same tenaculum, after a modification which Isambert gave it, was made to open and serve as a dilator, in order to introduce the tracheal canula.

Bourdillat makes two stages of the operation: the first comprises the incision of the tissues down to the trachea, the second the incision of this latter.

St. Germain proceeds in a somewhat different manner, and his method has been described by my former interne, Dubar,[1] who has put it into practice in my service: The trachea is opened as you would open an abscess, the left hand grasping the neck makes the trachea prominent, and with a single thrust of the bistoury the air-passages are entered. A bistoury specially constructed enables you to limit the depth of the incision on the one part, and on the other enables you to hear the whiz of the air which escapes from the trachea at the moment of the incision; then, the incision being made, with a dilator you place the canula in the trachea.

I do not know what future is reserved for these rapid methods, which, indeed, have always seemed to me of the most simple kind. At the same time, used to the slow processes, I prefer them, while still recognizing the advantages of the quicker methods. Nevertheless, these advantages are at a discount when the operator fails, as he often will, speedily to introduce the canula; and this, because he attempts to do it through a wound which includes in the same extent the skin, subjacent tissues, and trachea.

SUPPOSED DEATH FROM THE ADMINISTRATION OF MALE FERN.—Dr. Coghill, of Ceylon, administered male fern according to a prescription recommended and containing the following ingredients:

Æthereal tincture of male fern...	ʒ iss.
Pomegranate	ʒ ij.
Kousso.....	ʒ iij.
Kamela	ʒ ij.

This was taken in two doses, an interval of four hours elapsing between, so that six drachms of the extract was the amount in each draught. The effects following the two doses were excessive purging and severe vomiting, with acute cramping pains, which it was deemed necessary to relieve by subcutaneous injection of morphia, one-fourth grain. The patient, however, died, in the opinion of the medical attendant, from choleraic diarrhœa, which was then epidemic in the neighborhood; but, according to the friends of the deceased, from the effects brought about by the unusual dose of male fern administered. A suit for malpractice was brought, but Dr. Coghill was exonerated.

[1] Dubar: De la Trachéotomie dite en un seul temps (Bull. de Thér., t. xcvi., p. 447, etc., 1879).

Original Communications.

A CASE OF FOREIGN BODY IN THE EXTERNAL AUDITORY CANAL.

Removal by Displacement Forward of the Auricle and Cartilaginous Meatus.

By ALBERT H. BUCK, M.D.,

NEW YORK.

On August 3, 1882, I was asked by my friend, Dr. Francis Delafield, to assist him in removing a locust bean from the ear of a boy, nine years old. The story told by the mother, was as follows: On the day previous one of the boy's playmates had thrown or pushed the bean into his right ear. No pain followed, but yet the mother was anxious to have the foreign body removed, and accordingly she consulted a physician in the village in which she was spending the summer with her children. His efforts to extract the bean caused pain, and failed to accomplish the object desired. The mother then decided to bring her son, on the following day, to New York. On examination, with the speculum and reflected light, Dr. Delafield found that a hard and very slippery brown body was firmly impacted between the bony walls of the external auditory canal, in the immediate neighborhood of the drum-membrane. It did not rest against the latter membrane, however, nor against the soft parts immediately above it, for it was ascertained later that quite firm pressure against the bean produced little or no pain. At one or more points the cutaneous lining of the canal was found to be torn, and a bloody secretion bathed all these parts. The boy was then entirely free from pain, and there was no soreness of the parts around the ear. Sulphuric ether was administered, and while the boy was in an unconscious state, repeated efforts were made, both by Dr. Delafield and by myself, to dislodge the bean from its remarkably firm anchorage between the anterior and posterior walls of the canal. These efforts were made entirely with steel hooks, which were passed flatwise between the bean and the wall of the meatus, and then turned through an arc of about ninety degrees, so as to bring the short arm of the rectangular hook directly behind the foreign body, between it and the drum-membrane. No force that we could bring to bear—although applied directly *a tergo* and therefore in the most advantageous manner—was sufficient to dislodge the bean. The boy was allowed to regain consciousness, and the mother was informed that it would be necessary to partially separate the outer ear from the underlying skull, in order to gain more complete access to the foreign body. She was also told that in our efforts at removing the bean we should be very likely to seriously injure the drum-membrane and ossicles, and might even destroy the hearing of that ear entirely. Her consent to the operation was readily obtained, but as it was necessary for her to make preparations for a prolonged stay in the city, the mother begged to have the operation postponed for a few days. In the meantime Dr. Delafield transferred the entire charge of the case to me.

From experiments made with different specimens of the locust bean,[1] which the boy's mother had given to me, I ascertained during the following days a few facts that threw light upon the difficulties of the problem of removing such a foreign body from the ear. In the first place, the outer surface or shell of the bean is essentially as hard as ivory. In attempting to drill through this outer shell I found that unless I held my drilling instrument (a new and very sharp dental drill) exactly at right angles to the surface of the bean, which in turn was held firmly by the fingers of my left hand, it quickly glided off from the point attacked. I repeated this experiment upon the impacted bean, taking, of course, every precaution to prevent the point of the drill from injuring the neighboring soft parts, but soon found that the procedure was not practicable. Soaking the beans in water, at a temperature of about 80° F. for even four days consecutively, failed to soften them in apparently the slightest degree. After boring a minute hole through the outer shell of the bean and then placing it in a glass of water, I found that at the expiration of twenty-four hours the physical characteristics of the bean had undergone a complete change. It had more than doubled in size, the outer shell had become so soft that it could easily be penetrated with a pointed or cutting instrument, and something strongly resembling a bud seemed to be sprouting from that part of the shell in which I had made the opening. I also tested one of the beans with strong nitric acid by placing a small drop of the acid upon the bean and allowing it to remain there until every trace of the fluid had disappeared. I then applied the sharp point of a knife to the spot thus treated, but was unable to discover any evidence of softening.

On August 8th the boy was brought back to the city by his parents. During the interval he had experienced paroxysms of pain in the ear, though not of a severe character, and there had been a constant watery discharge, tinged with blood. Frequent douching of the auditory canal with warm water had been the only treatment. On examination I found that the bean had not changed its position, nor had it undergone the slightest degree of softening. The cutaneous wall of the canal, however, was in such a swollen condition that the bean as a whole could no longer be seen.

On the following day, the patient having been anæsthetized, I proceeded, with the assistance of Dr. William S. Halsted and Dr. Huntington Richards, to perform the operation of separating the auricle from the bony parts constituting the orifice of the osseous meatus auditorius externus. As a first step the hair above and behind the ear was cut away for a short distance from the latter, and then a semicircular incision about three inches in length was made through the skin and underlying soft parts, above and behind the auricle. This incision began at a point situated in front of and a little above the upper and anterior margin of the auricle, and terminated at the tip of the mastoid process. The soft parts constituting this flap were then dissected from the underlying periosteum until the membranous part of the external auditory canal was exposed to view. The point of the knife was then passed, from without, through the membrane, as near as possible to the bony margin of the meatus, and the incision was continued both upward and forward and downward and forward until the calibre of the canal was fully exposed to view. Up to this point in the operation it had been found necessary to place ligatures around six or seven small blood-

[1] These beans are all of about the same shape and size. They are shaped like a hen's egg that has been flattened longitudinally, and they measure 10 mm. in length, 7 mm. in breadth, and 5 mm. in thickness.

vessels, the hemorrhage from which, though not considerable, was sufficient to prevent us from obtaining a distinct view of what we were doing. When the calibre of the auditory canal, however, was exposed to view, the constant welling up of blood from the deeper parts proved very annoying, and some time elapsed before it finally ceased. I was then able to see the bean lying transversely across the long axis of the canal, but its distance from the outer orifice was still so great that in my manipulations with the steel hook I was not conscious that I was operating at a materially greater advantage than when the auricle and cartilaginous meatus occupied their natural positions. After numerous efforts, and when I had almost reached the conclusion that I should fail to dislodge the tightly impacted foreign body, it suddenly yielded to a traction force greater than any I had previously dared to exert.

No attempt was made at this time to ascertain the exact condition of the drum-membrane. The raw surfaces were thoroughly washed with a strong solution of carbolic acid, and interrupted silk sutures were used in bringing the edges of the skin together throughout the upper portion of the wound, while the lower portion was left open for purposes of drainage. The ligatures, which had been applied to the bleeding vessels, had been cut off short, and they were left to take care of themselves. Powdered iodoform was blown liberally over all the raw surfaces, into the external auditory canal, and upon those outside dressings which came in immediate contact with the wound. Over these was then placed a large pad of absorbent cotton, and finally a gauze roller bandage was passed around the head and neck for the purpose of keeping the dressings firmly in position. Dr. Halsted thought that, even with this imperfect form of Lister's dressing, the wound might advantageously be left undisturbed for five or six days.

On the following day I found that the patient had passed a comfortable night, and had enjoyed his breakfast. The act of eating produced a certain amount of pain in the ear, but otherwise he was quite free from pain. Temperature, 100.5° Fahr.

On August 14th the dressings were removed. The motions of the jaw no longer caused pain, the temperature had fallen to 99° Fahr., and the only complaint made by the patient was, that the region about the ear itched intolerably. When the dressings were removed I found that primary union had not taken place at any point along the edges of the wound. There was no redness or swelling, no evidence of anything like a process of granulation, and only a trace of pus was visible at the lower part of the wound and in the external auditory canal. When the stitches were cut, however, it was found that primary union had taken place in the deeper parts throughout an area sufficiently great to keep the flap very nearly in its proper position. To favor union by granulation with the minimum degree of visible scar, I brought the edges of the upper part of the wound in close coaptation, and then applied rubber plaster in such a manner as to crowd the auricle and skin of the cheek upward and backward. The only other dressings employed were sheet lint and vaseline; a roller bandage being used simply for mechanical support.

From this time onward to August 19th I removed the dressings every day, cleansed the parts thoroughly, applied caustic (nitrate of silver) to the granulations in the lower part of the wound, whenever they appeared to be too exuberant and flabby, and then dressed the parts in such a manner as to keep the opposite edges of the wound as near together as possible. The ligatures came away on the 17th and 18th. An examination of the external auditory canal at this time showed it to be in a granulating condition throughout its inner half. There were no polypoid excrescences nor noticeable irregularities of the surface, and the discharge was quite scanty. The drum-membrane presented a smooth but reddened and swollen condition like that of the adjacent membranous part of the canal. None of the distinguishing landmarks were recognizable, nor was there any visible evidence of a perforation or laceration of the drum-membrane. The douche, with a lukewarm solution of boracic acid, had been used regularly since the fourteenth, and no other remedial measures were employed, at least so far as the meatus was concerned. With the left ear firmly closed the patient was easily able to hear ordinary conversation. The ticking of my watch was heard by him at a distance of six inches, and from this circumstance I drew the inference that the middle ear must have been involved only to a very slight degree in the inflammation that had been set up in the neighboring meatus.

On August 19th the patient was taken to his home in Buffalo and placed under the care of Dr. Frank W. Abbott, who has kindly furnished me with the following facts: The external wound healed finally on September 1st. The discharge from the meatus did not cease until about two weeks later. The perforation in the drum-membrane, which the doctor had discovered by observing that in syringing the ear the water found its way into the nasopharynx, healed at about the same time. It was not, however, until October 3d that Dr. Abbott was able to make out distinctly the well-known landmarks, and to locate the spot at which the opening in the membrane had existed; the presence of a small cicatrix in the anterior inferior quadrant showing it to have occupied that locality. It is more than probable that this perforation was the result of violence and not of an ulcerative process. The hearing had not materially improved; it was about the same as it was when the patient left New York. The congestion and swelling of the upper part of the membrana tympani not having entirely disappeared Dr. Abbott thought it was reasonable to expect that, with the subsidence of the slight remaining inflammation, a further improvement in the hearing would take place.

Remarks.—The present case is the first one in which I have known a smooth and symmetrically shaped foreign body to become tightly impacted in the external auditory canal. In fact, it is a rare thing, I believe, for even an irregularly shaped body to become so impacted in the ear that it may not be moved to a certain degree in one direction or another. The only cases in which I have found it necessary to employ an appreciable degree of force, in order to extract the foreign body from the ear, have been those in which I found the body in question (an irregularly shaped pebble) lodged in the tympanic cavity, into which it had been forced by previous unskilful attempts to remove it from the ear. Two such cases have come under my observation, but in both of them the force which I was obliged to employ was slight in comparison with that required in the present instance. Moreover, I am confident that a part of even that small force was rendered necessary only by reason of my inability

to apply it in the most advantageous manner, and not because the body was so tightly wedged in between immovable surfaces as to require this degree of force to dislodge it. In the present instance, however, the force was applied in the most advantageous manner, and yet the foreign body remained absolutely immovable until the amount of the force exerted was really considerable.

It must be admitted, it appears to me, that no ordinary force, such as that which a boy would use in pushing a locust bean into his companion's ear, would be adequate to lodge it in the peculiar position in which it was found when the ear was examined here in New York. In the absence, therefore, of other evidence, it is difficult to resist the belief that the physician who first saw the boy, must have changed the position of the bean by his instrumental manipulations, from one in which an expert might easily have extracted it to one in which repeated efforts, greatly imperilling the hearing of that ear, almost failed to accomplish the object desired. It is also a fair inference to draw from this case that it is decidedly better for the general practitioner, when called upon to remove a foreign body from the ear, to restrict his efforts to the employment of the syringe with tepid water. If such a simple and, as a rule, safe procedure fails to dislodge the body, he should not allow himself to yield to the importunities of the parents, or to his own desire to accomplish what is sure to present itself to his mind as a comparatively easy task. We should abstain from all further interference, and should advise the parents to wait until they can take their child to a physician who is familiar with the instrumental manipulations necessary in removing a foreign body from the ear. The cases are, I am confident, rare in which such a foreign body may not safely be allowed to remain undisturbed in the meatus for days, if not for weeks. Indeed, under favorable circumstances, a foreign body may remain harmlessly in the auditory canal for an indefinite period. As a general proposition, however, we may say that it should not be allowed to remain in the ear for a longer period than is absolutely necessary under the circumstances; for its presence may render an intercurrent acute inflammation of the middle-ear or of the external meatus—and at any season of the year such an inflammation may develop—a very painful and perhaps even a serious disease. It is better, therefore, to have the foreign body removed at an early day.

A word or two with regard to the employment of hooks in the deeper parts of the ear. If the foreign body is small, a slender silver hook, such as can be extemporized in an instant by bending the rounded tip of a delicate probe, will be found to serve the required purpose admirably. If the auditory canal is adequately illuminated, we can dislodge the foreign body more easily with such an instrument than with any other contrivance known to me. On the other hand, if the body occupies a large part of the calibre of the canal, a hook, in one form or another, is *almost indispensable* for its removal. The accompanying cut gives a good representation of the kind of hook which I have been in the habit of using during the past twelve years. It is made of malleable steel, and measures just five inches in length. However tightly a foreign body may seem to fit the auditory canal, it will always be found possible to push this hook onward between the skin and the foreign body, until the short arm of the instrument occupies a position in which we can rotate it through the desired arc of a circle, and thus bring it in contact with the farther or distal surface of the body. When the hook has once reached this position, we have it in our power to exert traction upon the foreign body, and thenceforward we are masters of the situation. Sometimes the hook slips, and we are then obliged to readjust it. At such times we may scratch or even lacerate the skin of the meatus.

In order to produce the least amount of damage, in manipulations of this kind, we must carefully observe the following precautions: At every step we must know in exactly what direction the short arm of the hook is pointing; and, if the foreign body lies in close proximity to the drum-membrane, we must also constantly keep before the mind an accurate picture of the anatomical relations of these parts. Unless the operator is confident of his ability to do both of these things, he should scarcely permit himself to attempt the removal of a large foreign body from the ear with a steel hook. In the hands of an unskilled person it is certainly as dangerous an instrument as it is useful in those of an expert.

We come finally to the consideration of the operation of displacing the auricle forward. Dr. J. Orne Green, of Boston, Mass., thus briefly summarizes the important facts relating to the history of this operation.[1]

"The operation of displacement of the auricle forward for the removal of foreign bodies is by no means new in theory. The whole subject is thoroughly discussed by Von Troeltsch in the seventh edition of his 'Lehrbuch' (1881). The suggestion of the operation is found in 'Paulus Æginetа' (660), and in recent times has been recommended by Hyrtl. Von Troeltsch approves of it where operative interference is imperative and other methods of removal are impossible, but suggests that in children the auricle and cartilaginous meatus be separated from the osseous meatus by a simple incision above the meatus along the squamous bone, and in adults, that the osseous meatus be reached by an incision along the lower wall of the cartilaginous canal. Neither of these methods seems to me adapted for giving a thoroughly free and large opening for the extraction of expanded bodies like those in this case [one of leaden bullets in the ear], and both seem open to the objection of insufficient drainage after the operation, if such becomes necessary, while the latter method must almost certainly wound the parotid gland and add another element of risk. Von Troeltsch narrates four cases where displacement of the auricle forward was performed, one by Langenbeck and three by Schwartze. All were successful and recovered; one healed *per primam intentionem* and the others by granulation."

On this side of the Atlantic the operation has hitherto been performed only twice, at least for the purpose of facilitating the removal of a foreign body from the deeper parts of the ear, viz., by Dr. J. Orne Green and by Dr. D. B. St. John Roosa.[2] In both instances the foreign body removed from the ear was a leaden bullet.

In the case which I have just narrated I was led

[1] Transactions of the American Otological Society, vol. ii., part 5, 1881.

[2] Dr. Roosa's operation is mentioned on page 477 of the Transactions referred to in the previous foot-note.

to perform the operation of displacing the auricle forward by the belief that I should thereby gain much more space in which to manipulate hooks or forceps, and that consequently I should be able to bring a greater dislodging force to bear upon the foreign body. I must frankly confess that in this particular case the gain in space did not materially diminish the difficulty of extracting the bean. The location, size, shape, and polished, ivory-like surface of the foreign body rendered the employment of forceps of any size or pattern useless; and yet the gain in space and shortness of the canal proves of greatest value in precisely those cases in which such a type of instrument is used.

In this connection I desire to call attention to the great amount of damage that may be done with impunity to the osseous portion of the external auditory canal. In the present case, for example, I may, without fear of exaggerating the truth, say that posteriorly and superiorly there was, probably, not one spot left, along the osseous part of the meatus, from which the periosteum (*i.e.*, the skin) had not been violently torn away; and yet, after the lapse of four or five weeks, all these parts were found to have resumed their natural relations and appearance. I have observed this same regenerative power of the periosteal lining of the auditory canal in other cases, and believe that we may safely trust it to repair any injuries that we may be compelled to inflict upon this part of the ear in our operative procedures.

THE EFFECTS OF RAILROAD TRAVELLING.—The effects of continuous travelling are sometimes injurious. The exact injuries and dangers, however, have not been fully studied. Many business men in this city travel from fifty to one hundred miles a day in going to and from the city, yet generally with no apparent harm. The effects would be likely to be different in conductors, porters, and engineers, who are often on the cars during one hundred, two hundred or more miles. A correspondent of the *British Medical Journal*, Dr. E. A. Cook, relates the history of a Pullman car attendant which is instructive: The patient had been four years in his situation, and had not been a single journey off work. He travelled every alternate night from London to Glasgow, and the next from Glasgow to London, sleeping during the day, when in Glasgow in the car, and when in London at his home. When at home, his sleep was broken and restless, owing, he explained to the absence of noise to which he was accustomed.

When first seen, he looked haggard, careworn, and bleached, but appeared well nourished. There was absolutely nothing the matter with him bodily, except a little indigestion; but he stated that he constantly had illusions that people were behind him, and that there would be an accident; he felt his life a burden, and was sure it was all owing to "the running." The latter idea so beset him, that he had no faith in being able to get well without a rest. He was in the habit of drinking a little beer, and smoked occasionally. The treatment was to stop all stimulants and smoking, to diminish animal food gently, and give drachm-doses of compound syrup of phosphates twice in the twenty-four hours. He got well within a month, and, a year afterward, he had had no return of the symptoms. He said that other carmen had suffered as he had done, and had broken down under it, after taking stimulants for relief.

AN ACCOUNT OF AN EPIDEMIC OF ACUTE DYSENTERY IN PATIENTS CONVALESCING FROM TYPHOID FEVER.

By HENRY LING TAYLOR, M.D.,

LATE HOUSE PHYSICIAN, ROOSEVELT HOSPITAL, N. Y.

ON September 1, 1882, there were in the service of Dr. Francis Delafield eight cases of typhoid fever in Ward 2, the principal male medical ward of Roosevelt Hospital. One of them (VIII.) died on September 6th, having been one week in the hospital; the others all progressed satisfactorily to complete convalescence. Of the latter seven, at least six were attacked with acute dysentery between September 21st and October 1st, while in full convalescence, three in the hospital and three soon after their discharge. Two of these were readmitted for the dysentery.

One of the cases of dysentery (I.) was fatal. The remaining case of the seven (VI.) is said to have had some intestinal trouble after leaving the hospital, but it is uncertain whether this was dysentery or diarrhœa.

This epidemic was confined to patients who had just had typhoid fever, and I do not remember that a single case of dysentery, aside from those I have just mentioned, has ever arisen in the hospital during the eighteen months over which my observation has extended.

There were several cases of typhoid fever in females in another ward at the time of this outbreak. None of these had dysentery.

The same water (Croton) and milk were supplied to all the patients, and many besides typhoid-fever patients were kept on an exclusive milk diet.

No more than the usual number of cases of dysentery was treated in the hospital during August and September last—about ten cases in all. The only fatal case was a man who died in Ward 2, on September 20th, having been ten days in the ward. The autopsy showed a very severe croupous inflammation involving the lower two-thirds of the large intestine, and, to a less degree, a foot of the lower end of the ileum. No ulcers. All of the cases of dysentery in typhoid-fever convalescents began soon after the death of this patient.

It is an interesting fact, though not an unusual one in the disease as seen in New York City, that of the eight above-mentioned cases of typhoid fever, four were constipated or had sluggish bowels throughout the whole course of the fever, and at no time had any diarrhœa; one (VI.) was constipated while in the hospital, but gave a history of diarrhœa for three weeks before admission; in three cases only (I., II., VIII.) was diarrhœa a prominent symptom during the fever. In Case I. the bowels were constipated for a week soon after the fever ceased. In nearly all the cases constipation preceded the dysenteric attack.

These cases had all been treated during the fever by the cold-water method rigorously applied, and were put on an exclusive milk diet. When the bowels were inclined to be loose, bismuth and pepsine, ää gr. x., were given t. i. d., or oftener, and when the opposite condition prevailed, warm enemata containing ox-gall or castor-oil, and in the later stages, one to three pills of aloes and myrrh were frequently resorted to. When the pulse weakened whiskey was exhibited p. r. n., and other indications were met as occasion demanded.

The symptoms and course of the cases of dysen

tery did not differ from those of acute attacks as ordinarily observed. The invasion was marked by pain in the bowels and by a febrile movement (100° to 103°), which latter usually subsided after a few days. To these symptoms were soon added frequent small, painful stools containing blood and mucus.

In Case I. (a colored man), the dysentery continued until the passages finally became involuntary and very frequent. The man became very much emaciated, and finally died of exhaustion, October 1st.

At the *autopsy*, October 2d, Prof. Delafield found the following conditions: *Left lung:* In lower part of upper lobe, cavity size of pigeon's egg, and close to this, lung studded with small areas of cheesy hepatization; in pulmonary pleura are a few miliary tubercles. *Right lung* normal, except for a few miliary tubercles in upper lobe. *Bronchial glands* enlarged and suppurating. *Large intestine:* Pretty general thickening of mucous membrane, with an exudation of fibrin over lower two-thirds. No ulcers. *Small intestines* normal, save for slight smooth, even excavations at Peyer's patches; cicatrized typhoid ulcers. *Mesenteric glands* enlarged; no peritonitis.

There were no signs of phthisis when patient entered the hospital, and Prof. Delafield remarked at the autopsy that in the negro, as in some of the lower animals, any prolonged and exhausting sickness was apt to end in tuberculosis.

It will be observed that the lesion of the large intestine in this case was almost the counterpart of that in the man who died September 20th in Ward 2.

Case I. was treated with dilute hydrochloric acid, castor-oil, and laudanum, starch and laudanum injections, etc.; the others, who all recovered, were put on the following treatment: The bowels were first freely opened with ol. ricini, ℥ j., tr. opii, gtt. xx.–xxx. The patient was then put on the ipecac treatment, with the usual precautions in regard to abstaining from food and drink for a couple of hours before and after the dose. The ipecac was given in two or three gelatine capsules of ten grains each, preceded by a hypodermic of Magendie, five to six minims, half an hour before. In two cases (IV. and VII.) the ipecac was not well borne, and was discontinued after a few days' trial. In Case VII. hypodermics of morphia were given p. r. n. to relieve pain.

After the more active symptoms had subsided it was generally found advantageous to put the patient on a castor-oil mixture, similar to the one recommended by West:

℞. Tr. opii deodorat ..... ℥ j., ℥ xx.
Ol. ricini ..... ℥ j.
Mucilag ..... q. s.
Aq. cinnamoni ..... ad. ℥ iv.
M. Sig.—℥ ss. t.i.d., or oftener.

Since the above observations were made there have been many cases of typhoid fever in the hospital, but no more cases of dysentery have developed.

Many authors have described both catarrhal and croupous inflammations of the mucous membrane of the large intestine as being found in a certain proportion of the autopsies on typhoid-fever subjects, and this has been repeatedly verified at the Roosevelt Hospital dead-house. Murchison, in his treatise on "Continued Fevers" (p. 563), London, 1873, says he has "known the symptoms and lesions of dysentery to coexist with those of enteric fever" and mentions others who have made similar observations. Liebermeister, in "Ziemssen's Cyclopædia" (Wood's edition), speaks (vol. i., p. 155) of "diphtheria of the intestinal mucous membrane" being "an occasional sequel to severe cases of typhoid fever, as it is also to severe forms of other diseases."

All these observations evidently refer to something quite different from the cases of dysentery which occurred at the Roosevelt Hospital, as the fever could not be called severe in any but Case I., and the dysentery began after convalescence had been thoroughly established. I have seen no mention in medical literature of any similar epidemic.

Case.	Age.	Date of admission to Roosevelt Hospital.	Previous duration of symptoms.	Fever ceased.	State of bowels.	Dysentery began.	Dysentery ceased.	Patient discharged cured.	Treatment of dysentery.	Duration of fever.	Duration of dysentery.	Remarks.
I.	21	July 20, 1882.	21 days.	Aug. 15, 1882.	Occasional diarrhœa. Constipated last week in August.	Sept. 21, 1882.	Died Oct. 1.	Died Oct. 1.	Dilute hydrochloric acid. Castor-oil. Enemata.	46 days.	10 days.	For autopsy see above. Dysentery followed dietary indiscretion.
II.	27	Aug. 14.	18 days.	Sept. 11.	Diarrhœa.	About Sept. 25.	About Oct. 5.	Sept. 18.	Unknown.	45 days.	About 10 days.	Patient reported his dysentery but did not re-enter hospital.
III.	22	Aug. 14.	14 days.	Aug. 24.	Constipated most of time. No diarrhœa.	Sept. 30.	Oct. 4.	Sept. 24, Oct. 13.	Castor-oil and ipecac.	24 days.	4 days.	Patient readmitted for dysentery October 24.
IV.	25	Aug. 20.	7 days.	Sept. 9.	Constipated.	Sept. 28.	About Oct. 18.	Oct. 22.	Castor-oil and ipecac.	27 days.	20 days.	Ipecac vomited.
V.	22	Aug. 22.	10 days.	Sept. 7.	Constipated.	Sept. 26.	Oct. 15.	Oct. 19.	Castor-oil and ipecac.	26 days.	19 days.	
VI.	19	Aug. 23.	About 6 to 7 weeks.	Sept. 14.	Constipated while in hospital, before diarrhœa.	.....	.....	Sept. 24.	.....	.....	.....	Reported to have had some diarrhœa after discharge from hospital, which disappeared on taking a cathartic.
VII.	16	Aug. 28.	About 21 days.	Sept. 12.	Constipated.	Oct. 1.	Oct. 16.	Sept. 30, Oct. 31.	Castor-oil, ipecac, and morphia.	36 days.	15 days.	Readmitted for dysentery October 6. Ipecac vomited.
VIII.	30	Aug. 29.	21 days.	Died Sept. 6.	Diarrhœa.	.....	.....	Died Sept. 6.	.....	29 days.	.....	Autopsy showed but one large deep ulcer in lower end of ileum; it had begun to cicatrize.

For convenience of comparison I append the above tabular account of the eight cases of typhoid fever in Ward 2 on September 1, 1882, premising that a few of the dates are only approximate. The periods under the heading "Duration of Fever" are reckoned from the beginning of symptoms to the time after which the temperature never reached 100° F.

THE patient can oftener do without the doctor than the doctor without the patient.

THE PERCENTAGE OF COLLEGE-BRED MEN IN THE MEDICAL PROFESSION.[1]

By CHARLES McINTYRE, A.M., M.D.,

EASTON, PA.

To the American Academy of Medicine:

From conversations at our last meeting and from journal comments upon that meeting, certain questions were suggested, and as possibly the same questions have occurred to others, this paper endeavors to collect some material to aid in a solution.

What relation has the Academy to the profession? What relation does the profession sustain to the Academy? In what does the mission of the Academy really consist? Otherwise, why an Academy? And, how can this mission best be accomplished? Comprehensive questions, and questions of importance to us.

It is essential to their solution that we first of all obtain a clear idea of the exact condition of the medical profession as at present constituted, although I fear that any suggestion of ignorance upon this subject, in the sessions of the Academy, may be deemed presumptuous.

I have endeavored to obtain data for the classification of physicians upon an educational basis by several

METHODS OF EXAMINATION.

I.—I endeavored to collect statistics from the district societies of New Jersey and some of the county societies of Pennsylvania, which would show the number of A.B.s, the number of men who were for a while in a college of arts but did not finish the course, and the number who had no collegiate training at all. I have not received as many returns as I would like, but the results are as follows: Where out of 222 practitioners of medicine, as found on the rolls of county societies, 28 have the degree of A. B., 16 pursued part of a college course, and the remaining 178 have had no college training.

II.—In the "triennial catalogues" of colleges granting degrees in arts, the occupation of their alumni are frequently recorded. In some only those in the sacred ministry are indicated. In these the degree of M.D. can be fairly taken to include all in the practice of medicine. The same cannot be said of LL.B. and the members of the bar, although in some cases these are given under the column of "*law.*" In the older colleges the count begins with the Class of 1826, which will fairly represent the present medical generation. These results give us some interesting comparisons:[2] 58 colleges, with 38,054 alumni graduating with but one exception (where the counting began with 1822) since 1825, give the following relations between the professions: medicine, 9.2 per cent.; theology, 21 per cent., and law, 19.7 per cent. In all cases only the *alumni* are counted, the *alumnæ*, for fairness sake, being omitted, and, wherever possible, the B.A. degree only taken into consideration.

The following table, while not directly belonging to the subject under consideration, may be of some interest from an historical standpoint. It gives the number of alumni and the number of physicians in the periods indicated at the top of the columns prior to the year 1826. It may be well to say that the age of the Massachusetts Medical Society gave Harvard an opportunity to record quite a number as members of that society who had not received a degree in medicine. It is fair to infer that in other States the condition was the same, and that the number of physicians given in the table does not represent all the alumni who practised physic.

College and the Year of the First Class.	1642 to 1700.			1701 to 1750.			1751 to 1800.			1801 to 1825.			Remarks.
	No. of Alumni.	No. of Physi-cians.	Per cent.	No. of Alumni.	No. of Physi-cians.	Per cent.	No. of Alumni.	No. of Physi-cians.	Per cent.	No. of Alumni.	No. of Physi-cians.	Per cent.	
Harvard, 1642	449	9	2.0	1,187	9	0.7	1,871	131	7.0	1,383	171	12.3	
Yale, 1702	...	...	...	630	4	0.6	1,670	23	1.3	1,504	97	6.4	
New Jersey, 1748	...	...	...	...	...	...	924[1]	39	4.2	878	103	11.7	[1] Includes 1748–50.
Pennsylvania (University), 1757	...	...	...	...	...	...	370	16	4.3	283	37	13.1	
Williams, 1790	...	...	...	...	...	...	94	11	11.7	515	36	7.0	
Union, 1797	...	...	...	...	...	...	...	...	...	985[2]	88	9.0	[2] Includes 1797–1800.
North Carolina, 1798	...	...	...	...	...	...	...	...	...	372[3]	56	15.1	[3] Includes 1798–1800.
Jefferson, 1802	...	...	...	...	...	...	...	...	...	200	25	12.0	
Vermont, 1804	...	...	...	...	...	...	...	...	...	142	9	6.3	
Bowdoin, 1806	...	...	...	...	...	...	...	...	...	264	48	18.1	
Washington, 1806	...	...	...	...	...	...	...	...	...	119	21	17.6	
	449	9	2.0	1,817	13	0.7	4,929	220	4.5	6,654	691	10.4	

In this table is seen a progressive increase in the proportion of the alumni studying medicine. The per centum of the first quarter of the present century, 10.4, is, however, greater than the middle quarter, as shown in the previous estimate.

III.—Some of the catalogues give, also, lists of those who did not graduate, with indications of their professional life, and in Pennsylvania (College) and Lafayette I have had opportunity to examine their college book, giving biographical sketches of all their students. From these sources, in every possible case, excluding those who graduated elsewhere, I have endeavored to represent as nearly as possible those who entered upon their professional studies after a part of a course in a college of arts. Here, again, comparisons show the least number of

[1] A paper read before the American Academy of Medicine.

[2] Since making the same, our President has called my attention to the Report of the Committee on Medical Education in the Proceedings of the American Medical Association for 1851, page 421, where a similar examination was made of the catalogues of Harvard, Yale, Dartmouth, Brown, New Jersey, Union, Amherst, and Hamilton, in all 12,400 alumni and 7.5 per centum of physicians.

medical men, the figures being 280 medicine, 282 theology, and 353 law.

IV.—In some of the medical, theological, and law schools, the academical degrees are given in the lists of their alumni; from such data I have tabulated the following, which makes a very interesting study. As a supplement to this, I have added the record of the graduates of the Harvard medical department in three periods corresponding to those already mentioned.

No.	College.	Medicine. Classes.	Medicine. Per cent. of A.B.	Theology. Classes.	Theology. Per cent. of A.B.	Law. Classes.	Law. Per cent. of A.B.	Remarks.
1	Harvard	1825-79	35.3	1817-79	74.0	1820-79	56.3	
2	Yale	1825-80	23.6	1867-80	80.8	1843-80	32.0	
3	Bowdoin	1825-80	9.2	.....	.....	.....	.....	
4	Tufts	.....	.....	1871-80	36.7	.....	.....	
5	Vermont	1824-81	3.2	.....	.....	.....	.....	
6	Michigan	1851-71	4.1	.....	.....	1860-71	5.5	
7	Willamette	1867-81	1.8	.....	.....	.....	.....	
8	Princeton	.....	.....	1826-72	82.7	.....	.....	Matriculates.

HARVARD (MEDICAL DEPARTMENT).

Classes.	Alumni.	Per Cent. of A.B.
1788 to 1800	26	69.2
1801 to 1825	207	56.1
1826 to 1879	2,148	35.8

V.—The reports from the various professional schools to the Commissioner of Education return an estimate of the number of students who have a degree in arts or science. These results are thus collated:

Professional Schools.	Report for 1879. Number Reported.	Report for 1879. Per ct. of those who have a degree in Arts or Science.	Report for 1880. Number Reported.	Report for 1880. Per ct. of those who have a degree in Arts or Science.
Medicine	9,522	8.2	9,876	7.9
Theology	4,362	30.6	5,093	26.4
Law	3,018	25.2	3,134	24.1

In the New York MEDICAL RECORD for September 30, 1882, Professor Tyson, of the University of Pennsylvania, criticises the fairness of some percentages used in an editorial article of THE RECORD, February 11, 1882, founded upon the Report for 1879, because some of the medical schools fail to make a report of students possessing degrees, and they are counted as if none of them had obtained a degree in letters or science. This objection was present to my mind when I prepared the above table, but as my results were to be comparative, I assumed that the proportion of failures to report would be about the same in the three professions, and the ratio would be practically unaffected, so I used the summary as given by the Commissioner of Education. Since reading Professor Tyson's letter, however, I have thought that an analysis of the reports themselves might be of use, and prevent any charge of unfairness as to any of the results obtained. This analysis I put in the following form, which I hope will explain itself:

	Report of 1879. Medicine.	Theology.	Law.	Report of 1880. Medicine.	Theology.	Law.
Whole number of schools reported	68	133	49	72	142	48
Number reporting *no students* at all	2	10	6	5	9	4
Actual number on which to base statistics	66	123	43	67	133	44
Number making no report of degrees in arts and science	39	58	19	37	68	18
Percentage of whole	59.1	43.1	44.2	55.2	51.1	41.0
Number of students reported by these schools	5,614	2,092	1,218	5,279	2,537	768
Percentage of whole	60.9	48.0	40.3	53.6	49.9	34.5
Percentage of students in the schools reporting degrees in arts and science, who have such degrees	20.0	49.0	43.0	16.9	52.6	52.0
Percentage given above	8.2	30.6	25.2	7.9	26.4	24.1
Ratio given above	1.0	3.3	3.0	1.0	3.5	3.0
Ratio in this table	1.0	3.0	2.15	1.0	3.1	1.9

Professor Tyson concludes by saying: "There is no doubt but that most important results will accrue in the course of time from the accumulation of such statistics as Mr. Eaton is annually collating, while it is certain, also, that their value will be much less, if institutions are not willing to take the trouble to make the returns, now rendered so easy by the blanks annually distributed by the Bureau of Education at Washington." Is it significant that the officers of the medical schools seem least willing to make such returns?

But the preceding table does not represent the true state of affairs. In the theological and law schools everything that reports is included; in the medical schools a selection was made.

In the Report for 1879, five homœopathic schools report 760 students, of whom 80 have degrees; and three eclectic schools, 220 students with 27 degrees. In like manner in the Report for 1880, there are seven homœopathic schools with 950 students and 83 degrees; and five eclectic with 518 students and 94 degrees. By combining these with the results in the last table the percentage of medical students possessing degrees in arts or science in the schools reporting such degrees is reduced in 1879 to 18.2, and in 1880 to 15.7, while the ratio becomes 1 : 3.2 : 2.3 and 1 : 3.3 : 2.0, respectively.

Look at these tables, ponder over the results as you will! Can you escape the conclusion that classing the *medical business* among the learned *professions* is altogether a mistake? But to the facts and the testimony. Can not the following propositions be fairly sustained by the above statistics?

1. Only a small percentage of the eighty-three thousand[1] practitioners of medicine are eligible for membership to the Academy.

2. Only a small proportion of the graduates in arts study medicine.

3. Another small proportion pursue part of a course, and then enter upon the study of medicine without being a candidate for the degree of A.B.

[1] This estimate of the number of physicians in the country was obtained as follows: Through the kindness of the Superintendent of the Census, I obtained the number of physicians and surgeons as far as counted, for the Census of 1880 (September 25th). This was compared with the population of the same territory for 1880, and the ratio determined (1 : 588). The Census Reports for 1870 were then consulted, and the ratio determined (*a*) for the territory corresponding to my data for 1880, (1 : 601), and (*b*) for the rest of the country (1 : 630). Assuming that the proportion of increase was the same in the two sections, the ratio of physician to population in the unknown section for 1880 would be 1 : 616. From this the number of physicians was estimated in this section, and added to the counted number makes the above estimate.

4. That a greater percentage of college men enter upon the study of theology and law than medicine.

We are now in a position to ask ourselves again the questions stated above. What relation has the Academy to the profession? We, at least, will claim that our standard represents more correctly the proper sort of training that should be given to medical men. Consequently any requirement falling short of that does not, in the highest sense, properly prepare for the practice of medicine. We are, then, as an organization, trying to show the proper plan of education for medical men, and in so doing to lift the profession to a higher level than it now occupies. In other words, we are a missionary society, and the truth we proclaim is preliminary education.

But how does the profession regard the Academy? We can divide it into two grand divisions: those who *are* and those who *are not* eligible for membership. And another division line separates them each into two subdivisions: those who sympathize with a movement for educational reform and those who do not so sympathize. The first division and the first subdivision in each division, seem to me to have the smaller numbers. For there are in the profession (*a*) those who from pecuniary interest are opposed to decreasing the number of medical students, and a collegiate education would certainly do this. It does not require a very deep study of the history of medical education to show that one of the chief obstacles to the attainment of a better preliminary training lies in the faculties of the medical colleges themselves. From these an influence is exerted over the larger number who make up the lecturers, demonstrators, clinical assistants, etc., as well as their united personal influence upon the profession at large. (*b*) Another class think the society chimerical or quixotic and incapable of aiding at all in the reform which they believe ought to be instituted. (*c*) Others are simply indifferent. With these elements in the profession, one is forced to the conclusion, notwithstanding many need only the objects of the Academy to be brought to their notice to enter heartily into its fellowship, that among the present generation of physicians we cannot attain a large relative membership.

The third question, as to the actual mission of the Academy, must be discussed aside from the constitutional assertions. Is it exceptional to other societies, in that it requires special qualifications, or does it resemble those societies, *e.g.* the ophthalmological or neurological, which require other qualifications than simply being in good standing in the profession? This is not simply a distinction, as might at first sight appear, for if it belongs to the latter class its papers and discussions should be restricted to its specialty, *i.e.* medical education, Leaving this point undecided, the NEED of a thorough preparation for medical men is certainly the cause for the Academy's existence. And the methods which will best cause this *need* to be *felt*, are the methods which should claim the attention of the Academy. If every practitioner in the country—or even a large majority—possessed the qualifications for fellowship, there would have been no reason for organizing the Academy. Because the facts are just contrariwise, there is a very good reason for such an organization.

The mission of the Academy, then, really lies in this: *To convince the public that a preliminary training of the mind is absolutely necessary for the greatest efficiency of medical men.* Nothing short of convincing the public will bring about the desired reform, for so long as the people will employ men without this training, so long will men offer themselves for employment, and others be found to instruct them in their professional studies. It is only a question of political economy: the demand will determine the supply.

Any object that falls short of this fails to give a sufficient reason for the exclusiveness of the Academy. If it be simply to gather together as many as possible of those who have the qualifications in an annual meeting, to indulge in jeremiads over the degeneracy of the profession, we become a pharisaical mutual admiration society, binding our academical degrees as a phalactery over our eyes, and enlarging the borders of our garments to exhibit our blue-ribboned parchments. With such an object we become the radical party of the profession, delving down to the root of the evil, knowing that true reform can only come from a correct principle of action, and that all compromises are but temporary makeshifts. It is true that with radicalism there is odium to bear, and there are calumnies and misrepresentations, especially from those who see the need of reform, yet are not desirous of rudely breaking the repose of the present order of things. "Let the 'struggle for life' go on," say they, "and the 'fittest' survive," and by and by, after myriads of ages, there will be evolved the physician as he should be.

Such I believe to be the mission of the Academy. There remains only to discuss the methods to best accomplish this mission. Just here it may be well to digress a little and ask, What is the character of the society we desire the Academy to be? Shall it be popular, embracing every one who may possess the educational requirements? Or shall it be exclusive—a society which any medical man would regard a great honor to be admitted into membership; a French academy among American physicians, which insists upon preliminary education as an essential qualification, and thus would speak with no uncertain sound to those about to enter the profession, that the highest honor can only be obtained by beginning at the beginning? This idea has been suggested, but it appears to me not to have been the policy of the Academy thus far.

Assuming, then, that the desire of the Academy is to increase her borders, how can it best fulfil its mission? Its work is one of education, of enlightening the people upon a subject of vital importance. The greater numbers of light-bearers will, other things being equal, cause a more rapid enlightenment. Hence an increase of membership is very desirable. But almost the only place left for recruits are the M.D.s in prospect. These, we have seen, consist of three classes: those who have taken a complete college course, part of a course, or none at all. These latter frequently enter upon the study of medicine without a word of warning. Now and then their selected preceptor gives them sound advice and insists upon a proper preparation; but there is a deplorable ignorance and almost a criminal negligence upon the subject.

I am aware that frequently, men who look upon the practice of medicine as a mere trade, will, if refused by one, seek another preceptor or college; and this has been given as an excuse for taking students who have not had the proper preparation. I am also aware that diplomas have been purchased without the formality of a preceptor, attendance upon lectures, or examinations, and the same rea-

soning would compel us to recognize such men as true physicians. Notwithstanding this, I doubt not if the matter were candidly presented to those having the practice of medicine in view as a *profession*, a great many could be influenced to make a proper preliminary preparation.[1]

But how can these things be accomplished? There is a necessity of increasing the zeal of the Fellows themselves. Apparently some men have joined simply because they have no objection in the abstract to the objects of the Academy, and have been invited to join. These people need waking up, and in proportion to their activity we would have brighter centres of light, and a greater influence exerted.

How to arouse them is a more difficult problem. Some means by which there would be a greater attraction to the meetings would probably aid in this direction. That valuable papers are possible need not be doubted after an examination of the *Index Medicus* for the contribution of the Fellows to medical literature. If there could be such attractions, then, in addition to the faithful few, others would be drawn into the meetings, and—enthusiasm is contagious.

In addition to the personal influence of the Fellows, endeavors should be made to a more extended distribution of facts regarding the real requirements of the physician, and the necessity of men completing their preliminary education before entering upon their professional studies, and here I think the columns of the various college journals would be available. But all these are mere helps reaching only the profession and those within the personal influence of the profession; the people must also be led up into a higher plane. Nothing affords greater aid to the proper treatment of a case than a correct diagnosis. We should, by all the means in our power, find out by actual count, and not by mere estimate, the proportion of men whose training has been deficient. The presentation of these figures—and the press of the country would gladly receive them—would set men to thinking. The facts having been presented, the way is paved for additional information. The addresses of our Presidents, papers carefully prepared by the Fellows for the purpose, could be published in other than medical journals, and thus foster and direct public opinion, until the demand for preliminary education and thorough professional training, instead of being the cry of the few, would be *vox populi*.

PILOCARPINE IN POLYURIA.—A patient suffering from polyuria azoturica used belladonna, bromide of potassium, laudanum, injection of morphine, and electricity without effect. Hypodermic injections of nitrate of pilocarpine, 0.20 in water 20.0, diminished the daily secreted urine from ten litres to two litres, and the quantity of urea was reduced from nine grammes to three grammes. The weight of the body increased to eight kilogrammes in two months' time. In polyuria glycosurica the sugar disappeared after a short time. Fifteen injections will generally cure these diseases.—*H. Morgagni Giornale.*

---

[1] And does not the table given in an editorial article in the Boston Medical and Surgical Journal for October 13th, concerning Harvard, demonstrate this? The per centum of college-bred men (B. A., S. B., or their equivalent) for 1877–78, was 42.94; 1878–79, 41.85; 1879–80, 47.15; 1880–81, 48.37; 1881–82, 50.65; while the same increase is not shown in the Law and Divinity Schools.

ARE THE FOLLOWING MEDICINES INCOMPATIBLE?

POTASS. BROMID. AND QUININE SULPH., OR THE ABOVE WITH SULPH. MORPHIA? OR THE WHOLE OF THE ABOVE WITH CHLORAL HYD.? OR THE WHOLE OF THE ABOVE WITH SULPH. STRYCH.? AND IF SO, WHAT EFFECTS DO THEY PRODUCE THERAPEUTICALLY?

BY E. B. TURNIPSEED, M.D.,

COLUMBIA, S. C.

I HAVE for three years or more used bromide of potassium combined with sulph. quinia alone or with either one or all of the other medicines named above, with splendid results in many diseases. When I commenced using the first combination, that of quinine and potass. bromid. in combination, my druggist wrote to the editor of the *Druggists' Circular*, and he pronounced these medicines incompatible. This, if true, would have either given bromide of quinine or proven inert; if the former, in the doses I give it certainly would have been poisonous, whereas we really have the most happy effects of both; this I can testify to in doubtless thousands of cases.

It was some time before I found the proper vehicle for this most excellent formula: it is glycerine. First I have the potass. bromide thoroughly pulverized, then add the sulph. quin.; triturate well, then add glycerine q. s. very gradually, stirring the whole rapidly with pestle; then, by the same means, whatever tinctures are adapted to the case prescribed for, and they should fill out as near as possible the rest of the mixture, as very little water will precipitate either one or both ingredients, especially the quinine. The following are some of my formulas:

℞.	Potass. bromid.....	ʒ ijss.
	Quin. sulph.....	ʒ ss.
	Morph. sulph.....	gr. ss.
	Tinct. hyoscyami.....	gtt. lxxx.
	Tinct. zingib.,	
	Tinct. calamus.....āā	ʒ ss.
	Syr. pruni virg.....	ʒ ij.
	Ess. frag. virg.....	ʒ ss.
	Glycerine.....	q. s.
	Aqua.....q. s. ad.	ʒ ij.

M. Sig.—Shake well and give one teaspoonful in water every two or three hours when awake.

This is given in headache, neuralgia, malarial fever, sleeplessness, hysteria, and in typhoid fever at beginning, when there is much headache, pain in the neck, etc., combined with two or three drops of spt. terebinth. to the dose, the latter being always added first to the glycerine. Any of the tinctures commonly prescribed by the profession can be combined. As we often need tonics in protracted diseases they can be combined in the form of tinctures, such as gentian, cinchona, or veg. cathartic bitters in periodic fevers. Strychnia in such cases is an excellent adjuvant, being careful always to add it already well dissolved. Chloral hydrate in combination with the base of the formula answers well in allaying almost any nervous trouble, provided the pulse is over normal in rapidity; without this, except in small doses, there might be paralysis of heart. This medicine I never use in larger doses than two or three grains. The following is my formula:

℞. Potass. bromid..... ʒ ijss.
Quin. sulph..... ʒ ss.
Morph. sulph.,
Strychnia sulph.....aa gr. ss.
Chloral hyd..... ʒ ijss.
Tinct. hyoscyami..... gtt. lxxx.
Tinct. zingib.,
Tinct. calamus.....aa ʒ ss.
Syr. zingib..... ʒ ij.
Ess. vanilla..... ʒ ss.
Glycerine..... q. s.
Aqua.....q. s. ad. ℥ ij.

M. Sig.—Shake well and take one teaspoonful in water three times a day, ten or fifteen minutes before eating.

In great nervous trouble I have combined tinct. calabar bean, tinct. gelsem., tinct. cannab. ind., either one or all. When womb, kidney, or bladder trouble exists, I have combined with the base of the formula first given fld. ext. sec. cornut. for the first disease, the second fld. ext. buchu or digitalis, and for the last tinct. cubebs, or matico, or uva ursi. In fact, almost any of the medicines derived from the vegetable kingdom may be combined. I know no base for a formula in all my experience with medicines that has given better results. I hope the profession at large will give this remedy a fair trial, either in the doses indicated or smaller ones. So far as I know, it is a new combination and one I claim to have originated.

November 22, 1882.

Progress of Medical Science.

Pathology and Treatment of Gonorrhœal Cystitis.—Dr. P. Geffrier presents in the *Revue de Chirurgie*, No. 6, 1882, an elaborate study, based upon clinical observations, of gonorrhœal cystitis. The disease, he finds, may appear within a few days after the commencement of a gonorrhœa, or it may not be noticed until several months after the primary trouble has subsided. In the former case it is caused by too forcible urethral injections, by which the virus is swept up the canal into the bladder. In the case of the appearance of cystitis long after the initial gonorrhœa has disappeared, careful questioning of the patient will usually establish the fact that there had been some transient symptoms of bladder trouble, which, however, were hardly noticed among his other troubles and soon passed away. In such cases, then, we have to deal with a relapse. In addition to the ordinary signs of cystitis, such as frequent and painful micturition, etc., we have one very important symptom in hæmaturia. The blood is not intimately mixed with the urine, but appears only toward the end of micturition. This may be seen by instructing the patient to pass his water into two vessels successively, in the first of which the urine will be clear, in the second, tinged with blood. Usually the blood appears just at the end of urination and is accompanied by a sharp, painful, spasmodic urethral contraction. Then for a time after the flow of urine has ceased blood will continue to pass drop by drop, or else in jets accompanied by the involuntary reflex contractions. The mechanism by which this hæmaturia is produced has been clearly explained by Guyon. The mucous membrane of the neck of the bladder is normally very vascular, and the turgescence of the capillary network is greatly increased by gonorrhœal inflammation. Now, at the end of micturition, even in health, there always occurs a series of reflex contractions which serve to expel the last drops of urine. These contractions are not limited to the bulbo-cavernous muscle, but are participated in by the smooth fibres of the bladder, and especially by those about the neck. Thus it is that by this contraction, rendered the more energetic as the neck of the bladder is more irritable, the mucous membrane is compressed and the blood is squeezed out as from a sponge.

The duration of gonorrhœal cystitis is indefinite. Occasionally the disease subsides together with the initial gonorrhœa, but if it outlive its course it seldom undergoes a spontaneous cure. The symptoms are the same whatever may have been the duration of the disease, and the division into acute and chronic can be based only upon the length of time during which the affection has existed. Sometimes the urine presents no appearance of admixture with blood. In such cases the patient should be instructed to pass his water into two vessels. That which was first passed will be perfectly clear, but at the bottom of the other vessel, containing the urine passed at the end of the act, there will be found a whitish deposit, more or less abundant, and not infrequently tinged with blood.

Gonorrhœal cystitis is liable to be confounded with stone in the bladder or with tubercular cystitis, chiefly because of the bloody urine present in each of these affections. In calculus, however, the blood is always mixed with the urine, and never comes with the last drops only, as is the case in the disease under consideration. The symptoms also are always in abeyance at night in the case of vesical calculus, while in gonorrhœal cystitis they are often more urgent at that time.

The differentiation between gonorrhœal and tubercular cystitis is frequently quite difficult. The pain of tubercular cystitis is seldom absent; in gonorrhœal cystitis there is usually but little complaint in the periods between the calls to urinate. In gonorrhœal cystitis the pain is more readily controlled by opiates than it is in the tubercular variety. The hemorrhage also differs in the two varieties. In tubercular cystitis there is almost always some premonitory hæmaturia, analogous to the hæmoptysis occurring at the beginning of pulmonary phthisis, which appears before any of the other signs of vesical inflammation. We should always make a careful examination of every organ in the body with a view to the discovery of signs of tuberculosis in any of them, even when there is little doubt of the gonorrhœal origin of the inflammation. It is not infrequently the case that a tubercular cystitis will become engrafted upon a gonorrhœal inflammation, when a tuberculous diathesis is present, just as we see a simple bronchitis become the point of departure for pulmonary tuberculosis.

The treatment consists in the local application of a two per cent. solution of nitrate of silver to the diseased mucous membrane. The instruments employed are a flexible catheter with an olivary point, of the size 18 or 20 (Charrière)—unless a stricture compel the use of a smaller one—and a small Auel's syringe. The catheter is attached to the nozzle of the syringe, and both are filled with the solution. The instrument is then oiled and passed up the urethra until the bulbous extremity is felt to enter the bladder. It is then slowly drawn back until the

point is arrested at the entrance of the urethra. When in this position the piston of the syringe is pressed upon and a few drops of the nitrate of silver solution are slowly dropped upon the mucous membrane of the neck of the bladder. For the first injection, fifteen drops of a two per cent. solution suffice—this amount is subsequently increased to twenty, thirty, or even fifty drops. The injections are to be repeated every other day. The pain caused by the application is slight and but of short duration. Internal treatment by copaiba or sandalwood oil may be conjoined with the local applications, but it is not necessary. The injections should be continued as long as the frequent desire to urinate exists, even though all the other symptoms have subsided; otherwise there is danger of a relapse. In some severe forms of gonorrhœal cystitis the inflammation is not limited to the neck of the bladder, but involves, in greater or less degree, the entire vesical mucous membrane. In these cases it is advisable to wash out the bladder thoroughly with a solution of nitrate of silver of one part in five hundred, in place of the local application of a stronger solution. The injections should always be made soon after the patient has passed water, in order to avoid the precipitation of the silver by the chloride of sodium in the urine.

Obliteration of the Hepatic Veins in Cirrhosis of the Liver.—In an article on the above subject in the *Revue de Médecine* for August, 1882, Dr. Sabourin concludes that in the great majority of cases of true cirrhosis of the liver the hepatic veins are obliterated. This obliteration may be limited in extent or it may involve the entire intralobular system of veins, even including branches of very considerable size. The obliteration is due to a true adhesive phlebitis.

Fatal Tetanus complicating Typhoid Fever.—Dr. Simoneau relates the following: A man, sixty-six years of age, was attacked with typhoid fever of rather severe form, and a little irregular in its symptoms. The fever had begun to abate, and the patient was supposed to be entering upon convalescence, when he was suddenly seized with vomiting and pain in the epigastrium. On palpation a rigidity of the muscles of the right side of the abdomen was noticed. A few days later the muscles of mastication became affected, and the patient developed all the symptoms of tetanus and died in thirty-six hours. The hygienic surroundings of the patient were of the best, and no cause for the tetanus could be discovered. Dr. Simoneau could find no similar case reported of tetanus complicating typhoid fever, and regards this one as unique.—*Journal de Médecine et de Chirurgie*, August, 1882.

Fatty Heart.—Leyden distinguishes two varieties of fatty heart, in the first of which there is an increase of fat about the heart, but no disease of the muscle itself. Of the second variety, in which the heart-muscle is involved, there are two forms: pure fatty heart with muscular degeneration, dilatation and weakness of the heart; and fatty heart with sclerosis of the aorta and coronary arteries. The latter form is often accompanied with attacks of angina pectoris, and may result in sudden death from syncope or rupture of the heart. It is important to recognize this form of fatty heart, since here any measures taken to reduce the amount of fat can only be productive of harm through a general lowering of the vital powers. The diagnosis is often very difficult. The age of the patient, hereditary history, and condition of the radial artery must be taken into account. A very important symptom is angina pectoris, as is also dyspnœa occurring without reference to exertion or the ingestion of a hearty meal. In uncomplicated fatty heart (abnormal increase of fat about the heart and in the muscular substance) the author recognizes two stages. In the first, before the heart-muscle is involved, the patients suffer from shortness of breath after exertion or after eating. The apex beat is weak, and the area of cardiac dulness slightly increased. Upon the supervention of muscular degeneration and dilatation of the heart, graver symptoms appear. The earliest signs of failure of the heart are repeated attacks of cardiac asthma, and the appearance of cyanosis and anasarca. Treatment should be directed toward the removal of the causes—a deficient amount of exercise, the ingestion of rich food, alcoholic liquors in excess, etc.—and especially to the reduction of obesity. Muscular exercise should be insisted on.—*Prager Medicinische Wochenschrift*, August 23, 1882.

Vesical Calculus in a Child One Month of Age.—Dr. J. W. Troitzky relates the case of a child, one month of age, who was brought to him with the following history: The child, apparently healthy in other respects, was noticed to cry frequently when passing water. The mother found that the urine flowed in a full stream and without pain if the child's pelvis were raised above its head, but this manœuvre had failed in the last attack, and the flow of urine was entirely stopped. Examination revealed a distended bladder, and a hard body could be felt in the urethra. After the injection of a few drops of oil, the stone was gradually pressed out of the meatus. It was a calculus composed of urates, 8 mm. long, and 5 mm. in thickness, weighing 25 centigrammes. The urine contained numerous crystals of uric acid and the urates.—*Allgemeine Medicinische Central-Zeitung*, No. 99, 1882.

Shepherds' Ophthalmia.—Dr. Eduardo Mañez describes three cases of conjunctivitis, caused by the presence of the larvæ of the *musca carnaria*, observed by him in shepherds. The first symptom noticed was that of a foreign body in the eye, accompanied by a pain like the pricking of pins, referred to the oculo-palpebral fold of the conjunctiva. Then followed lachrymation, agglutination of the eyelashes, swelling of the lids, and injection of the conjunctiva. Small whitish worms, moving about with great rapidity, could be seen in the eye. If these could be extracted in the beginning, the conjunctivitis subsided without further treatment; but later their removal was difficult on account of the tumefaction of the lids. After a trial of various remedies in a similar conjunctivitis excited in rabbits, the author found that the best was the essential oil of juniper. This, when dropped into the eye, caused the death of the worms in a few minutes, and the conjunctivitis then disappeared under the ordinary treatment.—*Revista de Medicina y Cirurgia Prácticas*, September 22, 1882.

Ergotine in the Treatment of Typhoid Fever.—The following case, occurring in the service of Dr. Siredey, is reported in the *Journal de Médecine et de Chirurgie* for August, 1882. A young woman, in the third or fourth month of pregnancy, was admitted to hospital on the eighth day of typhoid fever, presenting the usual symptoms of the disease

in a marked degree. The temperature was 40° C. There were present a trembling tongue, tympanitis, bronchitis, diarrhœa, and a plentiful eruption of rose-colored spots. The patient soon became delirious, and all the symptoms continued to increase in severity. On the morning of the eleventh day of the disease, the temperature was 104° F. A hypodermic injection of ten centigrammes of ergotine was administered. The following day the general symptoms remained about the same, but the temperature had fallen to 103° F., and did not rise above this figure in the evening. The injections of ergotine were continued for six days, when the temperature became normal, and all the symptoms were ameliorated. They were then discontinued. Four days later the woman was delivered of a dead fœtus. This case is noteworthy as showing the undoubted effect of the ergotine upon the temperature. The abatement of the fever followed immediately upon the first injection of the drug, on the eleventh day of a severe typhoid fever. The abortion was not attributable to the effects of the ergotine, as the injections had been discontinued four days previously.

Corrosive Sublimate in the Treatment of Gonorrhœa.—Dr. Leistikow thinks he has confirmed, by a series of experiments, the discovery made by Neisser, of the presence of a special form of bacteria in gonorrhœal discharges. In the first stage of a gonorrhœa, when the discharge is thick and abundant, but few of the bacteria can be seen. They exist, however, in great numbers in the thin and scanty secretion of the later stages, sometimes even when the disease has existed over a year. In the treatment of gonorrhœa the author employs an injection of corrosive sublimate, which Koch has found most fatal to the various forms of bacteria. He uses a solution of 1 part to 20,000, 1 in 10,000 being found to be too irritating. In private practice a still weaker solution of 1 part to 30,000 is employed. The injections are made three times a day, and should be continued for three or four days after all discharge has ceased. The bacteria disappear, or are greatly diminished in number, after one day's use of the injections, but return again if the latter are discontinued too soon. Treatment by injections should not be begun until after the acute inflammation has subsided.—*Deutsche Medicinal-Zeitung*, September 7, 1882.

Fibroma of Renal Capsule.—Dr. Hüe recently presented to the Société Anatomique, of Paris, a specimen of a tumor discovered post-mortem in the body of a woman who had died of pulmonary disease. Its presence had not been suspected during life. The tumor was ovoid in shape, of the size of a large nut, and was attached to the convex border of the right kidney by a pedicle which allowed considerable motion. On section, its texture was exactly like that of a uterine fibroid, composed of a mass of irregularly woven grayish white fibres. Its tissue was distinct from that of the cortex of the kidney. The capsule of the kidney was closely adherent to the tumor at its junction with the pedicle. —*Le Progrès Médical*, September 23, 1882.

The Distoma Hæmatobium as a Cause of Vesical Calculus.—Dr. Zancarol, surgeon to the Greek Hospital in Alexandria, states that vesical calculus is a very common affection among the native Egyptians. He attributes this frequency to the presence of an entozoon, the distoma hæmatobium, in the water of the Nile. The Fellaheen drink this water just as it comes from the river, while the Europeans use it only after careful filtering. The former are frequently the subjects of stone in the bladder, among the latter it is of rare occurrence. In nearly every case of calculus the eggs of the distoma hematobium are found in the urine. The parasite inhabits chiefly the portal, mesenteric, hemorrhoidal, and vesical veins. Its eggs are deposited in great abundance in the latter, and accumulate in the submucous tissues of the bladder in such masses that the mucous membrane often breaks down, giving rise to frequent and intractable hemorrhages. From these hemorrhages result ecchymoses, infiltrations, and ulcerations of the mucous membrane. The uneven surfaces thus formed offer a favorable seat for the deposit of the urinary salts, and these incrustations being detached and agglutinated together form a nucleus for the stone. The eggs of the distoma and their broken shells are often found in the fragments of the calculi.—*Revue de Chirurgie*, August, 1882.

Contusions of the Abdomen.—In regard to contusions of the abdomen, Dr. Lentz states that they are often very grave in their results, even when no external signs of injury are present. In such cases they are accompanied by internal injuries, contusion, or rupture of some portion of the alimentary canal. Death results usually from peritonitis, or may be due to shock conjoined with hemorrhage. If other lesions exist together with the symptoms of severe abdominal contusion, the surgeon should give his attention chiefly to the latter condition, and should abstain from any active interference.—*Revue de Chirurgie*, August, 1882.

Hereditary and Congenital Malaria.—In an article on this subject in the *Revue de Médecine*, No. 7, 1882, Dr. Charles Leroux concludes as follows: "Owing to a lack of sufficiently numerous and definite observations it is impossible as yet to affirm the existence of congenital malaria, or to determine the rôle played by heredity in the etiology of infantile malaria. The fact, however, of congenital hypertrophy of the spleen, accompanied by certain characteristic lesions of malarial cachexia in the infants of women suffering from intermittent fever, would seem to point to a congenital or hereditary malaria. Some children appear to have at birth an hereditary predisposition to malarial fever, even when not exposed to any causes from without. They are often seized, shortly after birth, with a remittent fever of the same type as that displayed by the mother." The author leaves unsettled also the question whether the theory of heredity is able to explain the intermittent character of certain infantile affections, and the effect upon them of antiperiodic medication.

Hydatid Cyst of the Pleural Cavity.—Dr. Arzelà reports the case of a shepherd boy, twelve years of age, who was admitted to hospital with a diagnosis of pleurisy. The right side of the chest was enlarged, the intercostal spaces level with the ribs, and the respiratory movements absent. The percussion note was dull, and no respiratory sounds were audible. The boy died suddenly three days after admission. At the autopsy there was found an echinococcus cyst in the right pleural cavity, containing a clear fluid and a number of daughter cysts varying in size from a pin's head to a bean. The reporter stated that no traces of the right lung were discoverable.—*Lo Sperimentale*, September, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, December 16, 1882.

CONSTITUTIONAL ANOMALIES IN RELATION TO DISEASE.

PROFESSOR F. W. BENEKE'S elaborate researches upon the constitutional anomalies of men in relation to disease deserve a careful attention from physicians. It is impossible to summarize them entirely here, but the following will give some idea of the nature of his work.

There are, says Beneke, two kinds of anomalous constitutions: In the one, the organs are smaller than normal, and the mean of work done is below the healthy standard; in the growth and changes of tissue there is a tendency to hypoplasia. In the second class, most of the organs are above the normal standard, and there is a tendency to hyperplasia of organs, as well as to sclerotic changes generally —or, as it is termed, "fibromatosis."

In the first combination there are: a small heart, narrow arteries, large lungs with wide pulmonary arteries, small liver, and short intestines; there are generally weak muscles, weak, bony frame, and little adipose. Adults often have nervous weakness, phosphaturia, and oxaluria. In such constitutions the children are delicate, the stage of puberty is delayed, the various scrofulous and phthisical diseases develop, and also chronic anæmia. The author found, for example, in eighty-seven cases of phthisis, that the intestines were shorter than normal.

In the second combination there are relatively long intestines, a well-developed heart, wide arteries, small lungs, and large or very active liver. In such cases there develop rachitic diseases, obesity, atheromatous degeneration of arteries, psoriasis, cancer, and various connective-tissue hyperplasiæ. These hyperplasiæ, or fibromatoses, may be general or local. In the latter case, if it affects the lungs, there may be fibrous phthisis; if the kidneys, interstitial nephritis; in the nervous system, sclerosis or pachymeningitis, etc. Children with such anomalous constitutions are likely to be muscular and healthy in appearance. As they grow older, they may become victims of obesity, atheroma, arthritis urica, carcinoma, or of interstitial induration of various organs. The anatomical base of carcinoma, for example, was found to be long intestines, having great capacity, an active liver, small lungs, large heart, wide arteries, a strong, bony frame, well-developed muscles, and adipose tissue. In rachitic children the arteries of the neck are especially large and wide.

Beneke does not claim that individuals with the above-described anomalies are necessarily attacked with disease. They are, however, more liable to be affected; and if the anomaly is very marked, it will be almost impossible for its subject to remain healthy.

The physician who recognizes these types may do something to help his patient. Thus, when a child has, as a constitutional anomaly, organs below the normal size, their greater development may be helped by "gymnastics, friction with cool water, some wine, pure air, especially that of the seashore." When the individual grows up, and shows evidence of anæmia, or of a phthisical tendency, he must have, in addition, a "light, digestible food, not too poor and not too rich in albuminates and phosphates. Effort must be made to secure a larger absorption of food."

In children with relatively large organs, we must restrict by a proper diet the process of absorption, assimilation, and blood-making. The food must not be too albuminous; alcohol and phosphates should not be given. Fresh vegetables, moderate exercise, mineral waters, especially those containing chloride of sodium are indicated.

THE SURGERY OF THE LIVER.

THE subject of the surgery of the liver, revived some years ago by Dr. Sims, has been of late studied with renewed interest, sharing in this respect the impulse that has been given to abdominal surgery in general. It must be confessed, however, that no very brilliant results have yet been obtained in operations either upon the gall-bladder or the liver. In the former class of operations especially, Lawson Tait seems to have been almost the only fortunate surgeon. There has also always been a certain amount of doubt attending the diagnosis in many of these cases, which has interfered with placing the operation for cholelithectomy upon any solid basis. The plan advocated by Dr. J. T. Whittaker, of making an exploratory puncture and thus feeling for the gall-stones, helps to give greater certainty to diagnosis, and may possibly pave the way to a wider employment of the operation.

That it will always be hazardous and uncertain cannot be doubted, however, by any who have seen

the manner in which gall-stones often impact themselves in the ducts as well as in the gall-bladder. Even in apparently favorable cases the operation may prove fatal, as is shown by Dr. Jos. Ransohoff in a recent article upon cholelithectomy, read before the American Medical Association (MEDICAL RECORD, vol. xxi., p. 662). This gentleman reports a case which he claims to be the first instance where a diagnosis was positively made before the operation was begun.

The patient, a man seventy-six years of age, had suffered for six months from evidence of obstructed gall-duct. The needle of an aspirator thrust into the bladder plainly revealed the presence of concretions. An operation was performed. The gall-bladder was reached, opened, and half a pint of bile which distended it allowed to escape. Four stones, three in the bladder and one in the duct, were found and removed without much trouble. A sound passed through the cystic duct showed it to be open. The sides of the incision in the gall-bladder were sewed to the abdominal wall, a drainage-tube was inserted and the wound dressed with iodoform and absorbent cotton. The patient rallied well, but subsequently sank, and died next day, evidently from heart-failure.

The practice of aspirating the liver in cases of abscess is a general one, and often attended with good results. Dr. Ransohoff, however, cites another of the cases, now quite numerous, which show that it sometimes may be necessary or better to cut directly into the liver, making a large and free incision.

A married woman, thirty-two years of age, suffered from hepatic abscess. The aspirator was used twice at an interval of about a month, and a quart of pus removed each time. The patient's condition then grew rapidly worse, and, as a last resort, hepatotomy was resorted to. An incision was made into the abdomen, and the liver tissue over the site of the abscess was sewed to the borders of the abdominal wound. The abscess was then opened and washed out, about four quarts of pus being removed. The cuts were made with a galvano-caustic knife, and little hemorrhage took place. Subsequently the wound was kept irrigated with lukewarm water from 9 A.M. to 5 P.M. daily for two weeks. The patient's condition was for a time extremely critical, but she finally recovered.

The view that large incisions with copious irrigation is the better method of treatment in many cases has received support recently from M. Rochard. At a meeting of the Académie de Médecine he reported two successful cases treated in this manner. Some attempts to weaken the force of his views were met by reference to many other clinical histories which showed that large incisions would accomplish what neither the aspirator-needle nor the trocar could do.

NEGRO MORTALITY.

IT is well known that different races have a different susceptibility to disease as well as a difference in mortality rate. The racial peculiarities in this respect of the negro are especially well marked and interesting. The President of the Memphis Board of Health, Dr. G. B. Thornton, has recently discussed the subject in the *Sanitary Engineer*.

In the city of Memphis the negro mortality is much greater than that among the whites, the ratio varying between 5 to 3 and 5 to 4. In all the Southern cities this same preponderance occurs. In five of them, for example, the death-rate among the whites is about 18 per 1,000, among the blacks 32 per 1,000.

The birth-rate, on the other hand, of negroes living in cities is, we believe, a low one. In Memphis the number of births among this class in 1881 was 216, while the deaths during the same time were 806!

City life seems to be a poison to the negro. He dies quickly, and breeds slowly. The fact that he lives under the disadvantages of poverty does not alone explain this. The city population is being constantly supplied from the country, otherwise the excess of deaths over births would soon lead to a negro depopulation.

In the country the negro still thrives, and, as a whole, the race has multiplied since the war more rapidly than the whites.

The causes of the high death-rates among the Memphis negroes are chiefly consumption and acute lung diseases. These destroy this race whenever the climate is at all severe or the temperature inconstant. But, besides this, the negro has a particularly hard struggle for life in childhood and old age. There is a slight excess of population, and a considerable excess of births among the whites of Memphis as compared with the colored; yet in three years there were 789 deaths among negro children under five years of age, and only 376 deaths among white children under the same age.

Negro families are not held together, as a rule, by the same domestic ties which exist among the whites; consequently the aged and infirm have not so strong a claim upon their families or relations. Not having proper care, the aged soon yield to their infirmities and furnish a large contingent to the death-list.

The other causes of negro sickness and mortality in the cities are numerous. There is, first, the change from a tolerably regular and temperate country life to one which is quite the reverse. The city negroes are licentious in habits, improvident, irregular in work and careless in all their domestic habits and arrangements. Venereal diseases abound, and are a frequent cause of premature births and infantile deaths. If the syphilitic children reach adolescence, it is with impaired constitutions, which readily succumb to other diseases.

Of epidemic diseases there are two which seem to affect the negro with especial violence. These are cholera and small-pox. Among three hundred and thirty-eight cases of the latter disease which occurred in Memphis since January 1st, three hundred and eleven were among the negroes. It cannot be said positively that these diseases affect the negro by reason of a special susceptibility, but rather because of his gregarious and improvident mode of life.

There are, on the other hand some physical and mental characteristics of the negro race which help them in the struggle for existence. They are less susceptible to the endemic malarial fevers of the South; they are not so severely affected by yellow fever.

Another advantage which they possess is a more obtuse nervous organization. Though emotional and imaginative, they are rarely "nervous." When attacked by acute disease, they are less liable to nervous complications, such as convulsions, insomnia, and delirium. The negro is rarely the subject of chorea or epilepsy, nor, according to Dr. Thornton and others, is insanity so frequent or varied among them. The negro does not become a victim of nervous exhaustion or mental depression.

The negro race is a permanent part of our population, and is a social factor which cannot be ignored. It is increasing in the country more than it is dying in the city. By reason of less amalgamation, the half-breeds are steadily becoming less numerous, and the tendency is for the negro to revert to his original and pure type.

The lesson of mortality statistics, so far given, is that the negro is not yet prepared to cope with the white man in the more active struggle for existence in cities. He fails because he is morally and mentally weaker. He should remain in the country, at least until he is more civilized; and municipal governments would be wise to discourage the entrance of a population which dies at the rate of forty per thousand annually.

QUACKS AND QUACKERY IN MISSOURI.

Missouri is a quack-ridden State. There are 4,834 persons practising in its limits, which gives a ratio of one doctor or quack to every 450 inhabitants. Among these practitioners there are 3,453 who belong to regular medicine, and over 1,300 eclectics, homœopaths, and nondescripts. Hardly more than half (2,546) of the entire number of physicians, however, are graduates of regular schools.

The above are figures collected with much care by Dr. Willis P. King, President of the Missouri State Medical Society. They were presented to that body at its last meeting.

But this does not represent all of Dr. King's investigations. It is bad enough to learn in general that nearly half of the persons who practise medicine are not graduates of reputable schools. Further analysis, however, reveals particular facts which are still more disagreeable. He states that 269 persons are known to be or suspected of being abortionists; that there are 1,904 persons who are deemed by competent judges to be quite incapable of practising medicine intelligently; and that there are 452 persons who are considered to be of an immoral character, 34 of these being women.

Estimates made by local physicians throughout the State place the annual loss of life from quackery at 5,570 persons—an estimate that is considered by Dr. King to be too low. The sum of from one million and a quarter to two millions of dollars is paid annually into the hands of these quacks.

Still further, of the 269 or more abortionists, many make it their sole business, and at a moderate estimate over 8,000 children are destroyed annually before they are born!

The array of statistics thus given is certainly a startling one. They make the subject of quackery so real and practical that it should appeal to every class. It may be thought that there is some exaggeration, but a perusal of the entire address will certainly do much to allay incredulity. Citations are given from letters received from 114 counties; nearly all telling the same kind of stories.

One correspondent writes: "The Physio-Eclectic Medical College of Cincinnati, O., has agents in the State, selling diplomas—the terms being an examination and the payment of a fee of eighty dollars."

Says another: "Deaths from post-partum hemorrhage in the hands of ignorant men, are more common here than from any other cause." Another reports 25 quacks among the 75 doctors in his county; while in a neighboring county the proportion of quacks is estimated at two-thirds, "scarcely one of whom can write his name without running his tongue out."

A travelling cancer-doctor makes sometimes fifty dollars a day for services that are utterly worthless. In one county it is estimated that there are fifty people suffering from curable diseases who are prevented from submitting to proper treatment by the promises of quacks.

Unique cases are reported in which quacks have blistered the glans penis for strangury, punctured the caput succedaneum, mistaking it for the bag of waters, plunged a knife into an aneurism, killing the patient, and so on. A medical man in one county promises to cure a nasal catarrh in one sitting, in proof of which he "removes the catarrh and places it on a saucer!"

Some statements are made which almost stagger credulity, and which might be most fittingly emblazoned in the *Police Gazette*. A correspondent

from Central Missouri writes: "An advertising swindler here is guilty of crimes every day that he lives which ought to send him to the penitentiary. He deliberately castrated one of his male patients, and then took his wife away from him, and has kept her in open and notorious adultery ever since. He is an abortionist, and scarcely tries to conceal the fact."

Such recitals make one pant for breath, and ask if the Code of Ethics is not a somewhat futile moral agent in Missouri.

Dr. King very strongly urges that the medical profession of Missouri use its influence to secure a registration law. It seems impossible that the profession can fail to be aroused to some activity by the facts that have been disclosed. We wish that some one equally earnest with Dr. King might investigate medical affairs in other States. We fear that Missouri does not stand alone in the peculiar character of its medical advisers.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE.

THE medical profession in this country has very universally allowed itself to be saddled with the obligation of notifying cases of infectious disease. A doctor in many cities of the United States must make these notifications without recompense, or be subject to fine or even imprisonment. The profession has allowed the law to get this hold upon it, partly because there was a desire to help along preventive medicine, partly from indifference. In the latter respect it is an illustration of Herbert Spencer's charge that Americans are careless of their individual rights.

We refer to this now because, after much struggling, one of the chief English advocates of compulsory notification by medical men has withdrawn from his position. At least, we are told by the *Medical Press and Circular* that such is the case as regards the editor of the *British Medical Journal*, who has heretofore been an ardent advocate of this particular form of compulsion.

The violent opposition to the measure in question developed among British medical men is in striking contrast to the apathy shown by Americans. There is no question that the notification by doctors is a humane and useful public act. But society has no right to ask special favors of or place special obligations upon medical men without some recompense.

BODY-SNATCHING IN PHILADELPHIA.

THE recent accounts of body-snatching in Philadelphia are well calculated to arouse public indignation, not only in that city but throughout the country. It is particularly to be regretted that the Jefferson Medical College should be so intimately associated with the affair. The scarcity of subjects for dissection will hardly be considered an excuse for obtaining bodies by questionable methods. From the evidence offered, it would appear that the college authorities could not have been in entire ignorance of the means to the end. At least the public will hardly give credit for so much innocence. The necessity for anatomical material is always great, even in the larger cities, but that will hardly be an argument for grave-robbing. The latter crime is only calculated to arouse the public to the pitch of resisting every measure calculated to legalize dissection. Pennsylvania has long wanted such a law, but there is no chance for its passage on the plea that if bodies cannot be obtained by fair means, they will be forthcoming nevertheless. For the present, at least, cadavers will be scarcer than ever in Philadelphia.

Reviews and Notices of Books.

ECZEMA AND ITS MANAGEMENT. A Practical Treatise based on the Study of Two Thousand Five Hundred Cases. By L. DUNCAN BULKLEY, A.M., M.D. 8vo. New York: G. P. Putnam's Sons.

THAT eczema—one of the most frequent and troublesome of skin diseases—has not received the attention it deserves and demands from the general practitioner cannot be denied. We welcome, therefore, any teaching giving us so practical an idea of the diagnosis and management of the affection as does the present volume.

The author leaves no doubt as to the constitutional character of eczema, and lays particular emphasis on the gouty, strumous, and neurotic diatheses as predisposing causes. The polymorphous nature of the disease is clearly shown, as is also the necessity of an accurate diagnosis to render treatment effective.

The book is throughout readable and instructive. We would particularly commend, however, the chapters on etiology and differential diagnosis to those who have been in the habit of prescribing alike for all non-contagious eruptions.

THE BUSY PRACTITIONER'S VISITING LIST, CLINICAL AID, AND POCKET LEDGER. Detroit: Geo. S. Davis.

THIS little work possesses certain features which may be considered an improvement on other forms of visiting lists. Besides the usual necessary contents, very conveniently arranged for the busy practitioner, there are a few pages devoted respectively to the metric system, the treatment of certain emergencies, points in differential diagnosis, treatment of various poisons, a table of new remedies, etc., etc., all of which will be found to convey some exceedingly useful information.

HANDBOOK FOR WATER-DRINKERS. By G. L. AUSTIN, M.D. Boston: Lee & Shepard; New York: Charles T. Dillingham.

IN this little work the author has endeavored to place before those who are not expert in chemistry, a simple and easily applied method of water-analysis, to the extent necessary for determining the presence or not of various contaminating matters affecting the purity of water for drinking purposes. An appendix is also added, giving the formulæ for the several solutions mentioned throughout the work. It is hoped that the book will prove very useful in this direction.

THE SPINAL NERVES. By A. H. P. LEUF, M.D. Brooklyn, N. Y.: F. B. O'Connor, Jr. 1882.

DR. LEUF, in a work of sixty pages, gives an excellent description of the spinal nerves. Others have done this before, however, and the chief merit of the present treatise lies in some very good diagrams and charts. These are carefully made and will be helpful to students.

A TREATISE ON THE PRACTICE OF MEDICINE By ROBERTS BARTHOLOW, M.A., M.D., LL.D. Third Edition. New York: D. Appleton & Co. 1882.

THE mere fact that a third edition follows so closely the first publication of this admirable treatise is sufficient evidence of its excellence. The present volume represents the revised work bestowed on the two previous editions, plus about fifty pages of new subject-matter. Almost the first impression one gets in turning its leaves, one after another, is that the articles on the various diseases follow one another in more rapid succession than is usually the case, but a close and critical inspection shows that there is a completeness of statement, a breadth of experience, and a practical bearing in what he reads such as is not characteristic of many medical works placed in the practitioner's hand. Debatable questions are not even alluded to, the author evidently having made it his aim to utilize only such material as has been tested by himself and other reliable men. As a result of such a selective course, each disease is described in as few words as are requisite to give a clear conception of it. The treatment is of a most practical kind, because those remedies and measures are advised which have in the greatest number of cases been efficient supplements to the natural restorative forces. If this book possesses any one distinguishing mark which more than all else enforces its far-reaching usefulness, it is the personality that endorses every method recommended for the deliverance of the sick from their maladies. If some of the statements concerning the therapeutical effects of drugs seem too positive, it must be remembered that there are few men whose actual experience in the line of careful investigation in the use of different medicines has been more extended than that of Professor Bartholow. The diseases incident to the cerebro-spinal system are very fully discussed, while there are many invaluable points given on the management of fevers. The chapters on the inflammatory disorders of the respiratory and digestive organs are of special interest. The illustrations are very distinct and furnish great aid in the elucidation of certain subjects. In thus referring in a most general way to the merits of this work, we merely bring to the notice of our readers that which will attest its own value in its adaptability to the diverse needs of the general practitioner.

TRICHINÆ ARE KILLED BY COLD as well as heat, according to the experiments of Bouley and Gibier. These gentlemen used birds to test the viability of the parasites, since they do not enter the muscles of birds, but remain in the intestines. It was found that if a ham weighing five pounds were subjected to a temperature of 12° to 15° C., for five hours, the trichinæ would be killed. According to this, pork can be safely eaten raw, provided it first be frozen.

HABITUAL CRIMINALS in English prisons are stated to be a healthy class of people, and to be remarkably free from any scrofulous taint.

Correspondence.

A STUDY OF LEPROSY AT MOUNT LEBANON, SYRIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: At the stated meeting of the Medical Society of the County of New York, June 26, 1882, my former professor, Dr. H. G. Piffard, presented one patient and gave the interesting history of another, both leprous. I at once compared his views and statements with my own practice, after having seen about a dozen cases or more of both tubercular and anæsthetic leprosy. My limited experience fully corroborates all he says. I am able to get hold of the histories of only five patients at present, all of the same village on the slopes of Mt. Lebanon. Four of the five are members of the same family. I will give the history of that family in full as the other six members were not contaminated by the disease.

Ishak Ibriheem (male) married Merriam Ammoora. Both were in perfect health at the time.

Merriam gave birth to her *first* child Hannie, who married and gave birth to three children. She subsequently died at the age of about thirty, but had no skin disease of any kind. Her widower and children are in perfect health.

Merriam's *second* child, Briheem (No. 1), died in infancy with no lesion of the skin.

Merriam's *third* child, Jurjus, died of tubercular leprosy at the age of about twenty-five. He was the second member of this family so affected. He was of a gloomy disposition. He had frequent attacks of turning "as black as a darkey" (as his brother expressed it) from the age of puberty till about his twentieth year, when tubercles appeared on his extremities and face. Another chap ran off with his intended bride, which was considered by the natives as the exciting cause. But the true cause undoubtedly was this: he had a scratch on his leg and his mother put her stocking on to this wounded leg; the scratch never healed. She was a leper at the time.

Merriam's *fourth* child, Yakoob, is about twenty-eight years of age, married and has one child. He and family are in the best of health.

Merriam's *fifth* child, Briheem (No. 2), is twenty-five years old, lost his only child the past week of diphtheria. He and his wife are in perfect health.

Merriam's *sixth* child, Helany, died at the age of about eighteen of tubercular leprosy. She had been out gathering bitter herbs, was caught in a very heavy rain and got thoroughly soaked. She had high fever followed by large red plaques which disappeared after some time (could not tell how long). She then had five or six pimples about the root of the nose which soon became real tubercles, and ulcerated before long. Her legs, feet, forearms and hands were about the same time the seat of tubercles, and the phalanges, though not dropping entirely off, were very deeply ulcerated. She never menstruated and the tubercles appeared at the age of ten or twelve. She was the third member of the family affected with leprosy.

Merriam's *seventh* child, Sara (No. 1), died at the age of three with no lesion of the skin.

Merriam's *eighth* child, Sara (No. 2), is now about fifteen years of age, and has tubercular leprosy fully developed. She is the fourth leper of the family, and became such five years ago. Tubercles

cover all her fingers and toes. The little fingers are so enlarged by them as to be the size of her thumbs. The left hand is worse, and has already commenced to ulcerate. Tubercles are also to be found in large numbers on her nose, ears, temples, over her malar prominences, on her cheeks, and over the rami of the lower jaw, giving a most decided leonine expression. There are no tubercles on the trunk, the skin being as soft and smooth as an infant's. They extend only to the knees and elbows, and not lower than the neck, and many of them are ulcerated. There is no discharge, and, in most cases, a scab covers the ulcer. The roof of her mouth—both hard and soft palate—is ulcerated. She has no pain at all. She has never had any attacks of vomiting—nor, indeed, any member of her family.

She has never menstruated, and has no signs of womanhood. Her breasts and nipples are no larger than a babe's, nor are her genitals developed. The mons veneris is devoid of its usual covering of hair. She is not willing to put herself under treatment, with the hope of only *possible* improvement and no *promise* of recovery.

Merriam herself, the mother, died at the age of forty-five or fifty, of tubercular leprosy. She was the first leper in this family. She has had no relations affected with any skin disease, nor have there been any previous cases of leprosy in this village or in all this region. There is no possible history of syphilis, and she seems to be a case of *sporadic leprosy*. Her son contracted the disease, not by inheritance—for she was not a leper till long after his birth—but by means of her sock, which she used as a dressing for his scratched leg. In the cases of her two daughters, I could not trace any contagion except that, at first, all the family ate together, but finally the lepers had a separate dish, and ate alone. Her daughters may have, and probably did contract the disease before the separation took place. The cause for the appearance of leprosy in Merriam is generally believed to be the following: When Sara (her eighth child) was three days old, she got up and carried the obstetric chair on which she was confined, to the waddy, or brook, and washed it there. This was in the month of January; and on her return, she complained of great heat in her hands and legs. Tubercles appeared, as in the cases of her children. She subsequently had a miscarriage, and did not cease to menstruate till within three years of her death.

Her husband, Ishak, died suddenly at the age of about fifty, and presumably of heart disease. He was visiting in a friend's house, and was rolling up a cigarette, when suddebly it dropped from his hand, and he fell forward dead. He was ever an unfaithful mate, but had no venereal disease of any kind. He copulated frequently during his wife's menstrual flow, and long after she was a marked leper—in fact, up to within a few months of her death, but had no manifestations of leprosy. What might have appeared had he lived long enough no one can say. The natives believe that if congress takes place during the menstrual flow the *offspring* will be leprous, but in this case are at a loss to account for the fact that Merriam, and not her children, was the first to be attacked, and that without any leprous intimacy.

In another part of the village lives an old man of seventy or seventy-five years of age, who has had anæsthetic leprosy for five years. He denies entering the house of or having anything to do with the above-mentioned family. Merriam used to sell milk in the village, but after it was well known that she was a leper she could sell no more milk, and gave up the business. This is the only mode in which it is admitted he could have contracted the disease from her. She and her children had *tubercular*, he *anæsthetic* leprosy. The interesting features of these brief histories are,

First.—That there was no syphilitic disease in any of the above-mentioned cases.

Second.—That the leprosy appeared in the two girls at an early age, before puberty—preventing all development.

Third.—That the disease was sporadic in the case of Merriam, at least, and possibly in the case of the old man.

Fourth.—That the leprosy was not inherited. Professor James C. White, M.D., of Harvard University, says, in his article on "Surgical Diseases of the Skin," in the "International Encyclopædia of Surgery," vol. ii., page 647: "We only know one fact certainly: that it (leprosy) is hereditary; that a certain proportion of a leper's children are liable to the disease in after life." On page 671, same vol., Neisser says, "Leprosy is not hereditary." Merriam had no children after she became a leper, and so her case only proves that her children came by the disease in some other way than that of heredity.

Fifth.—That Merriam's husband was not contaminated or inoculated during ten to thirteen years. Neisser states that "leprosy is probably an infectious disease." Professor White says, "On the other hand there can be no doubt that in individuals without such hereditary taint, the disease is much more liable to develop in regions where leprosy abounds—that is where lepers live—than in other localities. This suggests the possibility of contagion by direct or indirect personal contact." Ishak would seem to disprove contagion and inoculation, while his son would prove the latter, and his daughters the former, or both.

Sixth.—However, all that is positively proved from the above cases is that leprosy is not the *fourth stage* of syphilis, Dr. Fitch to the contrary notwithstanding.

November 1, 1882.

After writing the above, I have read with the deepest interest the article on "The Question of Contagion in Leprosy," by Prof. James C. White, M.D., published in the October number of "The American Journal of the Medical Sciences" of the current year. The Professor is clear and decided in his belief in the contagiousness of the disease, while he does not exclude "hereditary transmission." The histories I have given confirm me in a similar belief. But while the Professor accepts with "great mistrust" the term *sporadic* leprosy, I must say that Merriam's case would seem to prove it, and four of my other patients—as I now recall their histories—confirm me in the belief that the disease may appear without any leprous intimacy. I shall hope to get the histories of these patients before long, to either prove or disprove the above.

CHAS. WM. CALHOUN, A.M., M.D.

TRIPOLI, SYRIA, November 10, 1882.

A STRINGENT EXAMINATION OR DULL STUDENTS.—Out of one hundred and fifteen medical students who went up for the first professional examination at Glasgow University, fifty-four were "plucked."

A FEW WORDS ON THE INCARCERATION OF PERSONS SAID TO BE INSANE.

To the Editor of The Medical Record.

Sir: The detention of persons in our insane asylums under legal commitments—sanctioned by physicians "duly qualified" under the laws of the State—has, of late, created so much excitement, denunciation, and delirious indignation in many of the secular newspapers, that I think some remedy should be suggested to protect our own profession against the infamous assaults that are made on those who perform the innocent and benevolent offices of medical advisers to the insane.

The assaults of the so-called moral secular press are made—not by the owners or principal editors—but by a class of persons who revel in the publication of fictitious language and flaming abuse of all those occupying a dignified and responsible position before the public. When a remonstrance is made to these gentlemen, the answer is: "Well! the public likes this sort of thing." When appeal is made to the principals to redress the wrong, an offer is made in a kind and bland way to make any correction suggested by the injured person. But it is invariably too late. The ability they possess to injure finds no counterpart in their expressions of regret to repair the wrong done. The pleas of justification—"in the interests of, and for the public good"—is the mere twaddle and subterfuge rung in the ears of the public with more eloquence than sincerity. The recent assault on the character and integrity of a banker of unsullied fame and reputation found no redress at the hands of a jury—a small minority of whom were "for the defendant." A recent libel of the most infamous character, that appeared a few weeks ago in an evening paper, reflecting on the private character and professional reputation of a distinguished and estimable chemist, has never been retracted—nor is it in the power of any such newspaper to repair the wrong—its good offices are impotent to render any good service to any person or any cause. But to the main issue: when a plundered and outraged public finally demands an exposure and cessation of the wrongs, the witnesses who could throw light on "the ways that are dark," are too frequently intimidated and prevented from giving their testimony by the presence of persons whose etiology no one can mistake. Aided by the gentlemen of the press, the investigations fail in finding any persons on whom they can fasten the responsibility of wrong-doing.

Let me suggest some means of remedying and averting the abuse of physicians.

Let no one be deprived of his liberty on the ground of insanity without an order from a justice of a court of record, and a certificate signed by two responsible and competent physicians, whose examinations are certified to have been made in the presence of two disinterested persons, and whose signatures shall be attached as such witnesses.

I speak of responsible and competent physicians. It is useless to deny that persons are daily restrained of their liberty—on the ground of insanity—on the certificate of so-called physicians, whose incompetency to judge is soon manifested to the expert alienists of the asylums. The wrong is repaired as soon as possible, but the injury is not repaired by release from confinement. Let no one be permitted to sign a medical certificate who has not had some general experience in the treatment and management of the insane. It is absurd to assume that because a person has a degree in medicine he is *per se* an expert alienist or an expert surgeon. I doubt whether a post-graduate or policlinical course will add sufficiently to the intelligence of a large portion of those *regularly* graduated to entitle them, at any period of their lives, to be distinctively known as experts in any department of medicine.

This, of course, need not deter any of them from advertising themselves as specialists or volunteering as experts in any and every branch of medicine. But I should like, with all deference to the presiding justices of our courts, to suggest that they shall not permit any medical person to offer any testimony or evidence as an expert in medicine until he has first by proper answers to interrogations satisfied the court of his *fitness and competency* to give such testimony. This course is pursued abroad, and is followed, I am told, with great success, in many of the higher courts of Pennsylvania. If this plan were generally pursued it would add dignity to medical testimony, save the time of the courts, and relieve befuddled jurors from differentiating on the relative testimony and merits of professors and others representing divers schools and interests.

M. H. Henry, M.D.

427 Fifth Avenue, New York.

WEIGHT AND PULLEY EXTENSION FOR SCIATICA.

To the Editor of The Medical Record.

Sir: Having been aware for many years of the value of extension in some cases of sciatica, and not having seen anything of the kind in any journal or text-book, I venture to report three cases which I have recently treated by extension made with adhesive plaster, weight, and pulley.

Perhaps many physicians could recall the tenderness and muscular irritability attendant upon some of their cases; this has been the condition in many of mine. Coupling this fact with a personal experience when a boy, I was led to believe that relief could be obtained with a greater degree of satisfaction by mechanical means than by the administration of remedies, especially of the narcotic class. It has been my experience that muscular relaxation *must be secured* before relief could be obtained; I therefore resolved to try an expedient that at least could do no harm. After putting the measure to the test, the thought came to me that I might be mistaken as to the originality of the treatment. I wrote a letter to Dr. R. L. Rea, Professor of Surgery and Clinical Surgery in the College of Physicians and Surgeons of Chicago, Ill., in which I stated my treatment and its results. I will append his reply after giving my cases.

Case I.—Was consulted August 5, 1882, by an old lady; widow; corpulent; of sanguine temperament. Complained of severe pain from hip to heel in posterior of leg; said her joints ached. An inspection showed no redness about the joints, no pain on pressure, no constitutional disturbance, tongue clean and moist, bowels regular, kidneys active, skin dry and harsh, temperature normal, pain lancinating. Patient said she had been in this condition for seven months, that she had not been free from pain since January, 1882. Diagnosis sciatica. Prescribed cinchonidia sulph. and salicylate of soda, ää ʒij. M. fiat in capsules No. 10, et sig. one every four hours. The night of the 6th I was hurriedly summoned to go and see her; found her in terrible agony; proposed to administer hypodermic injec-

tions of morphia. She refused, saying that it "made her so sick" she would "rather die than take it." Something had to be done, as I knew she was a woman who would not say she suffered unless she did. I thought of my own experience when a boy. I was suffering from sciatica, and whenever I could get my foot fast in the foot of the bed, would experience relief by drawing myself up in bed and making extension.

I put on the extension, and hung to the cord eighteen or twenty pounds of sad-irons; in less than twenty minutes my patient was easy and getting drowsy. I left her for the night and went home, wondering why I secured so good a result so soon. The next morning I called to see her, and found as happy a patient as it is the lot of any to find. The pains had almost wholly subsided; the patient said she had kept on the apparatus about three hours, and then the limb began to feel tired, so she unbuttoned the foot-piece and slept a little, when she again began to feel the pain. She fastened the weights on again, and was relieved, and so on through the night.

I advised her to continue it through the day and following night. Next morning I found my patient up and dressed, declaring that she was well; advised her to take the capsules as before prescribed, three daily instead of one every four hours.

Patient at this writing still remains free from pain; health much improved.

Case II.—Married woman, thirty-five years of age; teacher in one of the departments of our public schools; consulted me August 27, 1882; is of slight build, a blonde of nervo-sanguine temperament. Said she had a severe pain in the hip, and referred it to the region of the great sacro-sciatic notch. Said the pain ran down the back of her leg at times, especially when sitting or in a recumbent position. She was poorly nourished and quite nervous; was fearful that she would be unable to go on with her work, and, being quite an enthusiast, this contributed not a little to her anxiety. The treatment was the same as in the previous case, except that I commenced with the extension and then gave the cinchonidia sulph. and salicylate of soda. Patient relieved in two nights. Has since had a slight relapse, but a single night's extension for a few hours at a time put an end to it.

Case III.—Commercial traveller; consulted me October 5, 1882. Had an attack of sciatica about one week before, and it was growing worse. Said he had syphilis six months ago; had taken potassa iodide with hydrargyri iodidum until the last month, when he contracted gonorrhœa, which up to date was discharging freely. Treatment same as in the foregoing cases. Cured of his sciatica in less than twenty-four hours, with no return up to the present.

I find that by taking hold of the foot and making extension, by pulling for a few minutes to the extent of fifteen or twenty pounds, if it eases my patient, it is a suitable case for the weight and pulley extension. I make button-holes at the foot end of the adhesive straps, so that the foot-piece can be loosened and rest the patient if the leg gets tired, or for any other purpose. I also place the pulley a little above the axis of the leg. I see to it that the leg is thoroughly extended, and make it a point to relax the muscles by hanging on sufficient weight. When the leg tires and the pains subside, I tell my patient to unbutton the foot-piece and rest until the reappearance of the pain, which in most cases is after the lapse of considerable time. In all my cases the recoveries have been perfect and all that could be asked. I will close by quoting Professor Rea's case:

"Chicago, September 8, 1882.

"Dr. Shoemaker: Your case of sciatica is very interesting to me. A student (physician) in the Chicago Medical College, two winters since, had an attack of it, and when he came to attend lectures was still suffering and had contracted the morphine habit—not very bad, but he had to take it regularly. I advised its immediate abolition and use self nerve-stretching, that is, by lying on his back with limb extended, bringing it up as straight as he could—practise it regularly, so as to put the sciatic nerve on the stretch, and exercise it, bringing the limb up and down, and before the session was half over he was clear of his morphia and sciatica—a parallel to your own case in a different way. You ought to report your case in The Medical Record, and you can quote my case if you wish.

"R. L. Rea."

Having already taken more of your space than I intended, and with the hope that it may benefit some one in the effort to relieve this painful malady,

I am, very respectfully,

M. Shoemaker, M.D.

Tipton, Cedar Co., Iowa.

New Instruments.

SELF-RETAINING SEMI-PRONED SPECULUM.

By ALEXANDER S. HUNTER, M.D.,

new york.

The cut (on p. 696) illustrates a modified Sims speculum attached to a modified Erichs holder. When in use the fulcrum *A* rests on the sacrum; the lever *B* is raised to nearly a right angle with the fulcrum, and from its buckle at *B*, the loop of the strap extends under the right arm over the left shoulder.

This instrument has been in daily and exclusive use in and out of my office for more than two years *since I have ceased to modify it.*

This fact would lead to show that I am entirely satisfied with it. And further, in the same direction it may be stated that the designer was independent of the instrument maker, having himself made the model and all its changes, while the instrument was doing months of service under strict criticism. It, therefore, represents not approximately but exactly his conception.

For it the following claims are made:

First.—It is made to be used in that position of the patient now adopted by all leading gynecologists.

Second.—It is adapted to all cases, and but one size is required.

Third.—It will retract the perineum and elevate the superior labium as perfectly as can be done by the most skilled assistant. Moreover, it will maintain the position required *without correction* for hours, if needed, irrespective of the movements of the patient.

Fourth.—The third claim is equally true at *all degrees of penetration.*

Without this latter excellence a "self-retaining" "semi-proned" speculum is in my opinion nearly

valueless; and it was to secure this advantage *for all cases* that I was led to modify Erichs' holder.

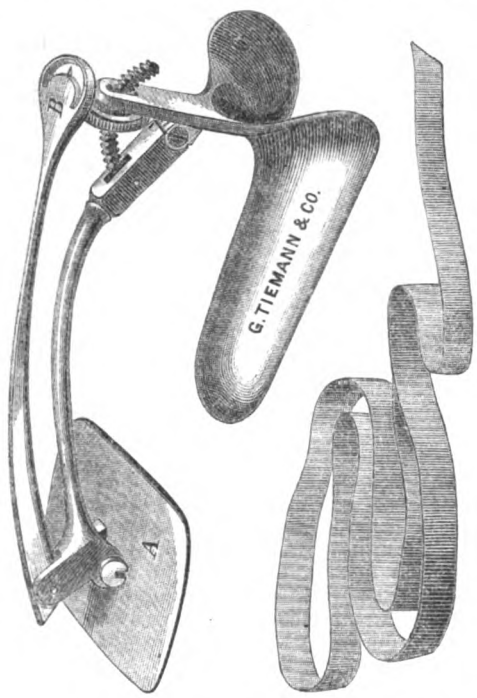
In comparing this instrument with that of Dr. Ehrichs the following advantages are claimed; but to him should be accorded all credit for having placed at our disposal so important a mechanical principle.

First.—It secures a better field through which to operate.

Second.—The shape and divergence of its flanges secure such equal distribution of pressure that its use is attended with the least possible discomfort to the patient.

Third.—The lowering of the fulcrum pinion, the change in the shape of the fulcrum, and the altered direction of the lever render the instrument self-retaining *at all degrees of penetration.*

Fourth.—The fulcrum pinion is so modified that



it can be detatched in an instant, thereby rendering the instrument less bulky than an ordinary Sims, and, with the fulcrum thus detached, it is just as convenient and, on account of its flanges, even more efficient than the latter when used in the same manner for the simple purpose of inspection.

Fifth.—The lever buckle is but half the size of Erichs', is round instead of angular, and its tooth is at all times guarded.

It can be attached, disengaged, or the tension varied in an instant, it will never let go while at work, and will not get out of order.

The instrument can be adjusted as quickly as an ordinary Sims, except for the time required to pass the loop of the strap over the patient's left shoulder. This delay is much more than compensated for by the fact that the strap secures a more perfect extension of the spine, and therefore removes the necessity in nearly all cases of loosening the clothing about the waist of the patient. Moreover, the strap supports and rests the spinal muscles in this condition of abnormal tension.

After the strap is once buckled, it does not require to be changed in order to change the position of the blade in the vagina, for by lifting the fulcrum from its bearing on the sacrum, and drawing the tissues upward, downward, or laterally, the blade will assume the position required. The necessity for having the instrument correctly made cannot be too strongly urged, for a slight variation in the direction of the lever will render its use inefficient; but if correctly made it will work in all cases without subsequent change.

Tiemann & Co. have copied mine, and have shown me several of their manufacture, which imitate it exactly.

32 East Twenty-ninth Street.

ARMY NEWS

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 2, 1882, to December 9, 1882.

Moore, John, Major and Surgeon. The extension of leave of absence granted November 3, 1882, is further extended one month. Par. 4, S. O. 283, A. G. O., December 6, 1881.

Caldwell, Daniel G., Captain and Assistant Surgeon. Leave of absence granted in Special Orders No. 105, October 3, 1882, Department of the Platte, extended three months. S. O. 279, A. G. O., December 1, 1882.

Crampton, Louis W., Captain and Assistant Surgeon. Granted four months leave of absence. S. O. 280., A. G. O., December 2, 1882.

Gorgas, W. C., Assistant Surgeon. Relieved from duty at Fort Brown, Texas, and will accompany the Nineteenth Infantry to Forts Clark and Duncan, Texas. S. O. 130, Department of Texas, November 27, 1882.

Maddox, T. F. C, Assistant Surgeon. Relieved from duty at Fort Brown, Texas, and will accompany the Nineteenth Infantry to Forts Clark and Duncan, Texas. S. O. 130, Department of Texas, November 27, 1882.

Reed, Walter, Captain and Assistant Surgeon. Assigned to duty as Attending Surgeon, Headquarters Department of the Platte. Par. 2, S. O. 127, Department of the Platte, December 4, 1882.

Taylor, Marcus E., Captain and Assistant Surgeon. The leave of absence granted August 14, 1882, is extended two months. Par. 6, S. O. 283, A. G. O., December 6, 1882.

Gray, William, First Lieutenant and Assistant Surgeon. The leave of absence granted on surgeon's certificate of disability, October 31, 1882, Department of the South, is extended five months, on surgeon's certificate of disability. Par. 3, S. O. 278, A. G. O., November 29, 1882.

The Proper Vehicles for Absorption.—Dr. Vigier has observed as the result of a series of researches he has made on this point, that lard is the best fatty body when medicinal absorption is desired, vaseline coming next, and glycerine next. This last, therefore, is a bad vehicle when cutaneous absorption is in view, but an excellent one when we wish to avoid this; so that we may by its aid avail ourselves of the parasiticide action of corrosive sublimate without fearing the production of mercurial poisoning. —*Gaz. Hebdom.*

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 9, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Dec. 2, 1882.	0	8	26	1	32	51	0	0
Dec. 9, 1882.	0	13	42	5	42	34	0	0

Dr. Joseph Hearn and Dr. O. H. Allen have been elected surgeons to the Jefferson College Hospital, Philadelphia.

Bellevue Hospital has undergone its annual castigation at the hands of the Visiting Committee of the State Charities Aid Association. We are told that the plumbing, originally bad, is growing worse every year. Unpleasant smells pervade the wards in consequence, while the rats and mice make matters worse by gnawing away the rotten closets.

Malaria and Skin Diseases—A Correction.—Dr. Lunsford P. Yandell desires to be put right upon the matter of malaria and skin diseases. His views are the following: "Malaria is *the chief source* of *acute* skin disease. Scrofula is *the chief source* of *chronic* skin disease. The more inveterate cases of skin disease are often due to the co-existence of these two things. The specific exanthems, of course, are not included here." He adds: "The proofs of the truth of my views are, in the first place, that the diseases of the skin are cured more certainly and more quickly by the antimalarial remedies on the one hand, and by the antistrumous on the other, than can be done by any other line of therapeutics; and in the second place, that careful and painstaking investigation will, in the majority of dermatoses, make apparent the existence of the malaria or the struma, as the case may be."

Weekly Report of Sickness.—The *Sanitary Engineer* has undertaken an enterprise which will prove very useful to its readers and the public. It has arranged with the various dispensaries of the city to have a weekly report of the new cases of sickness that occur at these places. For the week ending November 18th, it publishes statistics from seven dispensaries. These show a total of 2,813 cases of sickness.

A Bill for Preventing the Spread of Contagious Diseases is to be favorably recommended to the Pennsylvania Legislature at its next session, by the committee to whom it was referred.

A Hospital at Dartmouth.—The Faculty of Dartmouth Medical College have bought a lot of land in Hanover, N. H., as a site for a hospital, and are now looking around for the money wherewith to build it.

A New Morgue is to be erected in this city soon.

The Body of Guiteau has not been made a skeleton of, says Dr. H. C. Yarrow. It will be produced and turned over to the proper owner whenever such person can be found.

A Policlinic in Philadelphia in connection with the German Hospital is likely to be established.—*Philadelphia Times.*

The Bogus Bellevue Medical College.—The Dean of the so-called Bellevue Medical College of Massachusetts, Dr. C. J. Eastman, has been arrested on a charge of using the mails to defraud. Dr. Noyes, the President, has also been arrested. It appears that a genuine certificate of incorporation was obtained in May, 1880. Many diplomas have been sold in this country and abroad.

A Higher Degree in Medicine.—It is proposed by the Faculty in Medicine, in Paris, to create a higher doctorate than the simple M.D. It will be a doctorate of medical sciences, and will be given only after special examinations, and, perhaps, only after special original work has been done.

America catches European ideas very quickly; perhaps we shall soon hear of a similar degree in this country.

The Annals of Anatomy and Surgery.—Few American medical journals have reflected more credit upon the profession than the *Annals of Anatomy and Surgery.* We are glad to learn, therefore, of its continued prosperity, and that during the coming year special arrangements have been made to add to the value of its issues.

Mr. Oscar Clayton, F.R.C.S., has been knighted in consideration of his services to the Prince of Wales.

Death from Oil of Tansy.—A servant-girl, living in Trenton, N. J., recently died from the effects of oil of tansy. It was bought for her by a young man who was "keeping company" with her, and was taken, it is believed, to produce abortion. Post-mortem examination showed, however, that the woman was not pregnant.

Dr. E. C. Seguin.—At a stated meeting of the New York Academy of Medicine, held November 16, 1882, the following preamble and resolutions, reported by a committee appointed by the President at a former meeting, were unanimously adopted:

Whereas, Dr. E. C. Seguin, an honored Fellow of this Academy, has been stricken with a domestic calamity so overwhelming as to paralyze him with despair, and so heart-rending as to command universal compassion; therefore,

Resolved, That the Academy of Medicine offer to Dr. Seguin the expression of its profound and respectful sympathy and commiseration.

Resolved, That, while the Academy regards with solicitude the effect which this tragic bereavement may have upon a useful and brilliant career, it will cherish the hope that Dr. Seguin may recover the spirit and the strength to return to his home, and to take up his work in the sphere in which he has already achieved wide and well-merited renown.

Resolved, That a copy of these resolutions, signed by the President and Secretary of the Academy, be forwarded to Dr. Seguin, and be published in the medical journals of this city.

Dr. J. Solis Cohen has been elected Honorary Professor of Laryngology in Jefferson Medical College.

Multiple Sarcoma of the Skin.—Dr. R. S. Harnden, of Waverly, N. Y., sends us the following: "I met with a patient a few months since whom I believe to be suffering from multiple sarcoma of the skin, or subcutaneous cellular tissue. The patient, Mr. F—— H——, an American, aged twenty-six,

residing in Waverly, N. Y., in fair health, came to my office June 2, 1882, complaining of a bunch below the right breast. Upon examinntion I found a tumor which seemed to be beneath and partially adherent to the skin, but not adherent to the ribs, appearing about the size of a small orange, and pressed outward against the skin, causing considerable pain. The apex, which was somewhat conical, was of the color of a purple plum or darker, and showed through the skin. The patient said he first discovered the bunch in January, 1882. I removed the tumor, and being struck with its peculiar appearance, and fearing it might be a malignant disease, I prepared a portion of it for microscopical examination, Dr. Edwin R. Stone, an expert in the use of the microscope, very kindly assisting me. We found the cells to be spindle-shaped mostly, and comparing exactly with a beautiful specimen of sarcoma procured by Dr. Stone in New York. The growth returned in one month, regaining one-half at least of its former size, whereupon I removed it again, dissecting out all the adjacent cellular-tissue to which it had been attached, and also an elliptic-shaped portion of skin over it, and to which it was firmly adherent, cauterizing the interior of the wound. It had not returned at that point, but after two months the patient returned to me with one tumor over the clavicle, about the size of a large tomato, raising the skin about an inch above the surface; also one in the right axilla, size of a small apple; one over the humerus at insertion of deltoid, size of an almond; one in left inguinal region, size of a very large tomato; and one quite small one in perineum, the appearance of the skin over all of them being normal. He had repeated chills, and, at times, considerable fever. September 5th I sent him to Drs. Wey and Squires, of Elmira, who confirmed the diagnosis, and also prognosis, which was unfavorable. The patient afterward went out of my hands, and from bad to worse, became very weak and had frequent chills accompanied with much prostration and emaciation. Finally he became icteric, the tumors turned purple, and he died."

Ladies' Doctors.—The decay of the curate and his supplantation by the ladies' doctor is the subject of a very clever and witty sketch which appeared recently in the London *World*. The writer's portrayal of the modern ladies' doctor is not in every point flattering, but there is much truth in it, and it is well to have a mirror held up before us occasionally. The day in which the curate ruled the drawing-room in its less intellectual corners is, says the *World*, rapidly passing away. Coincident with his decay is the rise in popularity of the ladies' doctor. This new luminary is a modern institution. A century ago, to be sure, says the writer, incomes as large as any of to-day were made by fashionable physicians; but these physicians were only "medical men," and held no social sway. "Astley Cooper and Abernethy were surgeons of weight and even wit, but their *brusquerie* made them more the terror than the darlings of a drawing-room, and men of their type were no more welcome in their non-professional capacity than are the plumbers after they have soldered a leaky pipe."

The writer follows with a sketch of what constitutes, or should constitute, the successful ladies' doctor of to-day—a person who is called upon to minister to weak nerves, feeble livers and the other incidentals to late hours and much caring for many things.

He must, we are told, be a skilful physician, perhaps, but certainly, and above all things, he must be a man of the world. "He must know the ways and the weaknesses of his clients, and not dream of playing the part of their moral instead of their medical mentor. Hence he is familiar with all the topics of the day, and yet is not pronounced on any one of them, for he is too wise to offend the patients by whom he thrives. He may know the winner of the Derby, but he must not be seen at Ascot and Epsom, and, though his coachman may drive the best of blood, it would ruin him were it reported that he had been seen behind a four-in-hand. He may write medical works—the more the better—but society is skeptical regarding omniscience. Sir Charles Bell's popularity fell off after he published his book on the hand. Yet art, being only an elegant amusement, may be pursued. Sir Henry Thompson collects china and pictures, and Mr. Seymour Hayden etches, while a good many doctors garden, as did Sir William Lawrence, without finding their practice suffer. The ladies' doctor must not be an atheist—society has not come to that yet, and women who are nervous are always pious—but unless he cultivates a Dissenting connection, experience proves that it is safest for him to keep to a strictly orthodox course, neither too Broad Church, nor yet with a suspicion of incense and the eastward position. For ladies with a taste for ritualism instinctively lean on the curate, and between him and his supplanter there can never be anything in common."

The above sketch shows only what every one learns very soon—that in order to be a successful and especially a fashionable physician, tact and worldly knowledge are the essentials; knowledge and skill are only useful supplements. Too much knowledge, especially if it be of a more purely scientific character, is likely, in this country, to call down the reproach that its possessor is not "practical." To offset the ladies' doctor of to-day however, we have the specialist, who can generally be as scientific and unworldly as he pleases.

Empyæma in a Child—Antiseptic Drainage—Recovery.—Dr. W. Wotkyns Seymour, of Troy, writes: "On March 30, 1882, I saw the patient, a female child, two years and eleven months old, in consultation. Ten weeks before the child had had an attack of scarlet fever, but had continued to run down after the period of desquamation had passed. At the time of my first visit the temperature was 103°, pulse 130 and weak, and the child very much emaciated. The abdomen was very prominent, the veins on the right side greatly enlarged; the right intercostal spaces were effaced, and only the left side moved on respiration. Percussion showed flatness from second rib to umbilicus in the mammary line. Auscultation, absence of respiration on right side, and puerile respiration on left. Diagnosis—effusion into right pleura, probably purulent. I introduced an aspirator needle just beneath the angle of right scapula, and drew off twelve ounces of thick pus, and advised permanent drainage. This was deferred by the attendant until April 5th, when I operated. It was my intention to excise a portion of a rib, so as to introduce a very large drainage-tube, and make or not a counter-opening, according to the apparent freedom of drainage. The incision was made in the eighth intercostal space, below the angle of right scapula. I opened the pleura, and found I could introduce a drainage-tube with a quarter-inch lumen without difficulty, and that it permitted a free discharge of twelve ounces of pus.

The chest was washed out with a lukewarm carbolized solution, and the drainage-tube, about four inches long, inserted. The tube was fastened in by a thread passed through it and tied around the body, and prevented from slipping by strips of Leabury & Johnson's rubber plaster. Over this, after the chest was again washed out, a thick layer of cotton, soaked in carbolic solution, was placed, and outside a thick layer of dry cotton, fastened down by a broad roller. The temperature for a few days was 104° and 105°, with a tendency to drop after each washing out of the chest, which was done daily with slightly carbolized lukewarm injections. After four or five days the child began to mend and eat and sleep better. The chest was washed out once a day, and quinine, cod-liver oil, and iodide of iron given internally. To cut a long story short, the larger tube was changed gradually for smaller ones, until finally strands of carbolized catgut replaced the tube. The middle of June the discharge had ceased, and the wound healed. The child had grown as fat as a seal, and on examination the lung had returned to its normal condition, as shown by the respiration, though there was a slight dulness of the side, which might be accounted for by the thickened pleura. When I first saw the patient it seemed almost a forlorn hope, and I am satisfied that nothing but free antiseptic drainage, and the careful and judicious attention of the attendant, Dr. Magee, who took charge of the case a week after the operation, could have saved the child's life."

A Case of Paroxysmal Hæmatinuria.—Dr. L. E. Borcheim, of Clifton, Arizona, sends us the following history of an interesting case which was admitted to the Mount Sinai Hospital of this city in 1881, while he was the house physician of that institution.

Upon his admission, December 22d, the patient gave the following history: F. C——, aged thirty-nine; Portuguese; sailor by occupation, but for the past five years, owing to his having been incapacitated by reason of his disease from seafaring life, now labors along shore. His appearance is that of a rather anæmic but muscular person, with a well-formed chest and medium-sized stature. Has always enjoyed good health with the exceptions that in 1861 he had yellow fever, and in 1869 had intermittent fever. This last attack lasted sixteen months, but since its cessation he has considered himself perfectly well until the beginning of the present trouble some five years ago. He then observed that upon his exposing himself to cold his urine would, as he supposed, become quite bloody, becoming, after a period varying from five to ten hours, normal again, and as it gave rise to but trifling and temporary inconvenience the patient gave it no further consideration. This condition obtained every winter for three consecutive years, and he began to be troubled with dyspnœa, which gave him some uneasiness. The fourth winter, while on board a vessel, and after having been exposed more than usual to cold, he was suddenly seized with a severe chill which lasted an hour or more, after which he felt greatly exhausted and unable to resume his occupation. In about an hour following the chill he passed urine, as he describes it, the color of "strong coffee;" later, upon passing water, it had the appearance of port wine, and at each subsequent micturition the urine appeared a shade lighter, until after ten hours it had resumed its normal appearance. The above described condition has obtained ever since, greatly weakening the patient, giving rise to extreme dyspnœa upon slight exertion, and he finally comes for advice and treatment.

Upon physical examination the heart and lungs were found normal and the spleen slightly enlarged. Urine, amber color; sp. gr., 1.014; acid, negative chemically and microscopically. Patient's temperature, 99° F.

The patient having shown no symptoms of bloody urine since his admission, he was, at the advice of Dr. H. N. Heineman, the visiting physician, warmly dressed, and on December 26th, it being quite a frosty day, sent out for a walk in the open air; returning in three hours he complained of chilliness. His temperature was immediately taken in the rectum, and showed 99.8° F., being one degree higher than it was previous to his chill. One hour after his return he passed urine, which upon examination gave the following result: Color resembling English porter; sp. gr., 1.036; acid, albumen present in large quantities; microscopically negative; spectroscopically hæmoglobin.

The urine tested subsequently gave similar results, quantities of abnormal ingredients diminishing. After a lapse of ten hours urine again became normal. Various methods of treatment were employed with quite unsatisfactory results. A tonic course of iron and quinine was persevered in with the view of improving the general condition rather than prevent the recurrence of the paroxysms.

An Important Medico-Legal Decision.—A decision of much importance was rendered by Judge Donohue, in the Supreme Court, recently. The question for determination was as to the effectiveness of physicians' certificates alleging insanity in cases where insanity has not been legally proved. Judge Donohue held that such certificates are not *prima facie* evidence of insanity, and that the persons who procured them are bound to support the certificates with testimony in the course of a legal inquiry as to the mental state of the alleged lunatic.

The law says that no person shall be held in a lunatic asylum upon physicians' certificates for more than five days unless the certificates shall have been approved by a judge of a court of record of the district in which the alleged lunatic resides. Before granting his approval the judge may, in his discretion, take proofs as to the alleged insanity. The usual practice of the judge is, however, to approve the certificates without delay, upon the assumption that the persons who procured them will not proceed until the mental unsoundness of the subject of the inquiry is definitely determined. There can be no good reason, therefore, that they should be held to be anything else than a warrant for temporary detention.

Broken Thermometers.—Dr. A. A. Lyon, of Shreveport, La., writes: "I feel assured that I echo the sentiments of no less than thousands of our medical brotherhood when I assert that another one of the many 'opprobria,' so to speak, of our profession is found in the frequent destruction, by breakage, of our clinical thermometers. The present writer purchased this afternoon the fourth one he has possessed within the past thirty days. I am not a reckless man, neither have I failed to exercise due care in the preservation of these valuable little instruments, yet I never unscrew the cap and lift my thermometer from its case without a feeling of slight perturbation lest I leave the lower half within. This latter was my experience yesterday. Such

has been my experience many times before, and such, doubtless, has been the experience of every physician who uses them. How, when, or where these fractures occur oftentimes cannot be even remotely guessed at; neither can we, under the present system, guard against their continued repetition.

"Such losses are pecuniarily burdensome, to say nothing of the inconvenience one experiences in finding his thermometer a wreck at a moment when he most needs it. Now, it is plain that this evil is in the main due to the existing style of cases. Does it not seem most irrational to place a delicate and fragile instrument of glass within a tube of guttapercha, almost as hard as flint, there to be rattled like dice in a box by trotting horses and jostling buggies, week in and week out?

"The conclusion, then, is manifest that the cases should be lined with velvet, or some similar material, and the thermometer fitted closely and immovably therein. There is a wide field for some inventive genius to devise a thermometer less easily broken than those now in use, but until this is done very much can be gained by the adoption of the common-sense suggestion just made. Will you not, in the interest of the profession, and through the columns of your able journal, endeavor to inaugurate this needed improvement?"

DIABETES.—Professor Lasèque, of the Hôpital de la Pitié, makes some new classifications of diabetics. He says that there are the great and small cases, the former passing over thirty grammes of sugar a day, the latter less. These two classes no not run into each other. There is also a class of "diabétiques fixés" in whom the amount of sugar does not vary much, no matter what the diet or medicine. M. Lasèque does not believe in rigid diets or in gluten bread. The cachexia is the principal indication for treatment.

THE EYE AND THE LIVER.—Dr. Litten tries to show (*Zeitschr. für klin. Medic.*) that retinal changes take place in various diseases of the liver. He found especially retinal hemorrhages in cases of catarrhal jaundice, cholelithiasis, carcinoma, cirrhosis, abscess, and acute yellow atrophy. In two cases of cirrhosis he found pigment degeneration of the liver. In nine similar cases he detected hemeralopia, without any evident retinal change. Directly after tapping in a case of ascites the patient developed a neuro-retinitis. The important relation which the liver bears in pigment-formation may have something to do with the conditions described.

THE NUMBER OF PHYSICIANS IN THE WORLD.—According to calculations made by the Medical Academy of Paris, there are at the present time 189,000 doctors scattered over the world. Of these there are 65,000 in the United States, 26,000 in France, 32,000 in Germany and Austria, 35,000 in Great Britain and its colonies, 10,000 in Italy, and 5,000 in Spain. Putting aside pamphlets and memoirs innumerable, it is estimated that 120,000 works have been published on medical subjects. Among the writers 2,800 are American, 2,600 French, 2,300 German and Austrian, and 2,100 English.

A STUDENTS' UNION SOCIETY has been organized among the London medical students and younger medical men. The Society has fixed quarters, which will be a place of meeting for all the various local student associations. The association will undoubtedly be a useful one.

INFLUENCE OF NICOTINE UPON THE GASTRIC SECRETION.—W. Auress, of St. Petersburg, found that subcutaneous injectons of one-twentieth to one-fifth of a drop of nicotine in dogs, increased the secretion of gastric juice sometimes even to seventy per cent. above normal. It is often stated that tobacco has an opposite effect. Dr. Auress found that quinine decreased and pilocarpine increased the gastric secretions.

THE UNTIMELY DEATH OF DR. E. EVETZKY.—Dr. E. Evetzky, formerly of this city, where he was well known as a talented and successful professional worker, met his death under very distressing circumstances. Several months ago Dr. Evetzky moved to Durango, Col., and entered into professional partnership with Dr. H. A. Clay of that place. On Sunday evening, December 3d, he suddenly entered his office and shot his partner and then blew out his own brains with the same revolver, dying instantly. Dr. Clay died the following morning. No difficulty is known to have existed between them until the day previous, when Dr. Evetzky received a severe cowhiding from a Mrs. Moore and a Miss Hawkins, who accused him of talking disparagingly about them. Evetzky was under the impression that his partner had something to do with his being cowhided, and this, it is thought, led to the shooting.

ILLEGAL PRACTITIONERS.—On Wednesday, December 6th, the President of the New York County Medical Society appeared before Justice Ford, at the Jefferson Market Police Court, and entered complaints against the following illegal practitioners: "Dr." John C. Adams, 29 Bleecker Street, not registered; "Dr." Geo. H. Schwab, 59 Bond Street, not registered; "Dr." F. E. Ruhrenberg, 80 Christopher Street, not registered; "Dr." William H. Fuller, 429 Canal Street, registered, but bogus diploma, not indorsed; Dr. Marini, bogus diploma, not indorsed.

THE NEW CODE AND HERKIMER COUNTY (N. Y.) MEDICAL SOCIETY.—"*Whereas*, The New York State Medical Society, at its last annual meeting, adopted a new system of ethics, in place of the code hitherto in force, for the guidance and conduct in practice of the medical profession in this State; and,

"*Whereas*, We believe that in making the radical changes therein contained they have placed us directly in conflict with the parent organization, the American Medical Association; therefore

"*Resolved*, That we, the Herkimer County Medical Society, hereby declare our continued allegiance to the precepts and ethical code of the American Medical Association, adopted June 5, 1847.

"*Resolved*, That the delegate to the State Medical Society be instructed to urge by all honorable means the repeal of the existing code."

MEDICO-LEGAL SOCIETY OF NEW YORK.—The following officers have been elected for the ensuing year: *President*, Clark Bell, Esq.; *Vice-Presidents*, R. O. Doremus, M.D., and D. C. Calvin, Esq.; *Secretary*, L. P. Holmes, Esq.; *Treasurer*, J. Shrady, Esq.

THE LIVER-PAD OUTDONE.—An exchange tells of a doctor in Iowa who has invented an anal pad, by which the fæces are changed into gas, and the gas is deodorized, purified, and burned as a chamber light. It acts on the same principle as a liver-pad, and if worn over the mouth sweetens the breath, prevents cursing and swearing, and destroys the appetite for tobacco.

Original Lectures.

ON THE TREATMENT OF CROUP.[1]

By PROFESSOR DUJARDIN BEAUMETZ,

MEMBER OF THE ACADEMY OF MEDICINE; PHYSICIAN TO THE HÔPITAL ST. ANTOINE, PARIS, FRANCE.

Part II.

I now pass to the description of the slow methods. Here we proceed layer by layer, and the incisions are made with a deliberation and a slowness which necessitate that the child should be held perfectly still, and that there should be a sufficient light. You must have good assistants (these are sometimes difficult to find when you are with your little patient alone, or almost alone, in the country). First, then, obtain suitable assistants, so that your young patient may be held fast on the operating-table. I say *table* with intention, for you can operate best with your patient extended on a table, which should be strong and firm. Place under his neck a small hard cushion, which makes prominent the neck in front. Let one of the assistants hold the head firmly, another putting his hands upon the shoulders of the child should keep him fixed immovably upon the table, a third should take charge of the pelvis and the lower extremities, and all struggling should be rendered impossible. Finally, opposite you, and on the left of the table, you place the colleague or assistant on whom you are to depend for the most important services, such as sponging the wound, keeping it wide open by means of dilators, and illuminating the field of operation.

Trousseau placed great stress on this illumination, and advised the use of candles instead of bougies, as the former give a stronger and steadier light. The operation for croup is often performed in the night time, and the operator ought to have a good view of the tissues which he successively incises.

All these preparations are of the utmost importance, and you ought, gentlemen, never to commence the operation of tracheotomy till you have fully instructed each of your assistants in his respective duties. I have, in fact, seen the operation very badly done here in this city, and even left unfinished, because all these little details had not been attended to with promptitude and exactness.

For instruments, you want two bistouries, one of which should be probe-pointed; hæmostatic forceps, threaded needles, ligatures, a pair of retractors,[2] then the dilators and canulas.

It is understood that the patient shall not be put under ether. In Germany anæsthesia is practised; in France we never resort to anæsthetics, for sufficient reasons. Furthermore, in a great number of cases your patient is pretty thoroughly anæsthetized by the asphyxia under which he is laboring, so that he can very well support the pain of the operation.

Then you take your scalpel, and you make in the median line of the neck, just about the middle of the trachea, an incision which comprehends the skin and cellular tissue. As for the height to which this incision should be made, there exist different procedures, which are three in number: the super-cricoidean, the inter-cricoidean, and the infra-cricoidean processes. In the first process the incision is made on the crico-thyroidean membrane; in the second on the cartilage; in the third, which is the process of Trousseau and Bretonneau, the first rings of the trachea are divided. As far as possible, you ought to avoid making the incision of the skin and tissues too near the base of the neck, for the lower down you go the more blood-vessels of considerable size you are sure to find, and the greater the danger of serious hemorrhage.

Moreover, I cannot too strongly recommend you, gentlemen, to have fresh in your minds the surgical anatomy of the region on which you are going to operate.

You make a straight incision of suitable length in the median line; you cut through, layer after layer, the aponeurosis and the muscular interstices, and you come down to the trachea. As soon as you get a clear view of the rings of the trachea, fixing the latter firmly with your finger, you perforate the trachea with your bistoury, taking care not to go too deeply, and you cut, with the same bistoury, or with the probe-pointed bistoury, the three first rings of the trachea. Then, without removing the index finger of your left hand, using this as your guide, you introduce the dilator into the wound which you have made. The air escapes with force and a hissing noise, and the child respires freely; you sponge the wound carefully, let your little patient sit up, and wait a little while before passing to the last part of the operation—the introduction of the canula.

In the first stage of tracheotomy two kinds of accidents may supervene; on the one part hemorrhages on the other symptoms of asphyxia. The more turgescent the venous system, the more frequent and alarming the hemorrhage, but by your hemostatic forceps you can sufficiently arrest these venous hemorrhages, and even those which are produced by section of the thyroidean arteries; moreover, these hemorrhages cease promptly with the restoration of respiration. It has been proposed, in order to avoid hemorrhage, to perform tracheotomy with the thermo-cautery. Krishaber is one of the most determined partisans of this method. If the thermo-cautery offers advantages in constituting the operation a bloodless one, it offers serious inconveniences; it extends its destructive action beyond the limits traced by the operation, and gives rise to considerable sloughing, which renders the wound large and formidable. It is also likely to excite violent tracheitis. I opine, then, that, except in the case of adults and in exceptional cases, tracheotomy by the thermo-cautery should be discarded.[1]

---

[1] Translated from advance sheets by E. P. Hurd, M.D., Newburyport, Mass.

[2] [Dr. A. Caillé, of New York, has described a very ingenious tracheal retractor in The Medical Record, Vol. XX., page 724. It consists of a rubber band, at each end of which is fastened a short brass chain, and attached to the latter are two curved and sharp hooks. This retractor keeps the edges of the wound well apart; it may be hooked into the fascia as the several layers are divided, and finally into the tracheal wound. The trachea may be examined at leisure, and there need be no haste in getting the tube into its place.]

[1] Amussat, in 1870, was one of the first to apply galvano-canterization to tracheotomy. This method has since been employed by a great number of physicians. But it was found to be poorly applicable to the operation for croup, for the galvano-cautery demands a special apparatus, which it is difficult to obtain in an operation of urgency. So galvano-canterization was abandoned. De Ranse and Maron have advised to employ bistouries heated to a red heat, and St. Germain has employed a similar process.

Since the discovery of the thermo-cautery of Paquelin, this apparatus has been exclusively employed in the practice of tracheotomy, and the Societé de Chirurgie has discussed its application to this operation.

By the thermo-cautery you avoid hemorrhage—this seems to be its principal advantage. St. Germain and Pauly have shown that the eschars produced by the cauterization have considerable dimensions, making the wound a troublesome one to deal with, and even Krishaber now reserves the operation for adults (Amussat, Bull. de Ther., 1872, p. 472: Bourdon, Tracheotomy by the Thermo-Cautery, Arch. Gen. de Med., 1873: De Ranse and Maron, Gaz. Méd., 1874, etc.).

Apropos of hemorrhages, you will do much to avoid them by carrying your scalpel straight in the median line, and by taking pains that there shall be no involuntary deviation to the right or left. You will thus keep out of the way of the principal blood-vessels. The carotid even has been incised by a bungling operator. A high division of the innominates has sometimes been an element of danger.

As for the accident of apnœa with impending death, it is of frequent occurrence during the operation. It results from the hindrances opposed to the circulation (already profoundly troubled) by the position of the child, and especially by the immobilization of the trachea; immobilization absolutely necessary at the moment when you incise the tracheal parieties. If this accident happens to you, you must terminate the operation in haste, and by insufflations made through the wound endeavor to recall the child to life. In fine, there is another cause of asphyxia, it is the escape of blood into the trachea; you can combat this complication by aspirating the effused liquid through a female catheter introduced into the air-passages.[1]

The operation has been performed on children in such a state of asphyxia that they were like veritable corpses, and Trousseau used to take pleasure in relating the story of his patient whom he resuscitated.

The introduction of the canula constitutes the second stage of the operation, and this is, I must say, the most difficult part of tracheotomy. This difficulty results partly from the emotion of the operator, partly from the incessant hawking of the patient, who expels by the tracheal opening, blood and pseudo-membranous *débris*, in fine, from the tracheal wound itself, which when it is not made exactly on the median line, is not easily adapted to the introduction of the canula.

Therefore it has often happened that the canula has been placed in the peritracheal cellular tissue, and it has even been forced into the œsophagus. To escape these inconveniences, dilators have been multiplied. Laborde, Meunier, Lüer, etc., have invented instruments more or less perfect, which all have this inconvenience, that their branches, when introduced into the trachea, take up considerable room, and diminish the opening by which the canula should be passed. In certain cases, it has even been proposed to dispense with dilators, and to introduce the canula directly into the trachea, or to precede the introduction of the canula by the passage of a hard-rubber sound, to serve the purpose of a guide. I cannot advise you as to the best dilator to use, for in my opinion the best instrument for a surgeon to use is that which he is used to.

There are very many kinds of tracheal canulas; the perfection which has been attained in these instruments has contributed largely to the success of tracheotomy, and the invention of the double canula has rendered the dressings relatively easy and satisfactory.[2]

These canulas, which you proportion to the age of the child, are fastened around the neck, then with sticking-plaster or collodion you take care to protect the circumference of the wound and the inferior part of the neck from the mucosity which escapes each instant by the mouth of the canula.

In fine, you surround the neck of the patient with a little thin muslin or gauze, which filters the air before it enters the tracheal orifice. The child is then carried to its bed, made warm by bottles of warm water, and the third stage of tracheotomy begins—I refer to the dressings.

If tracheotomy has enabled the surgeon to recall to life the croupy child, it is only by the consecutive dressings that he can save the patient, where such a thing is possible. Hence the care and pains which these demand. They consist in the frequent removal of the inner canula, and in changing the entire canula, when occasion requires; also in medicinal pulverizations.

Whenever the canula becomes obstructed, and you will know this by the loud noise made during breathing, you need to take out the inner movable canula and cleanse it, or, leaving it in place, remove by means of a small pair of curved forceps the mucosities and pseudo-membranous *débris* which are in the trachea. Or you may mop it out with suitable swabs.

You ought early to remove the entire canula; this is a capital point in the operation. After the second day it is proper to make this change. Now the introduction of the canula, which was so difficult at the time of the operation, becomes an easy matter, for it has already made for itself a lodgement in the trachea.

The next day you again remove the entire canula, and you take advantage of the opportunity to close the tracheal opening, and thus test the permeability of the larynx. You repeat this process every day, taking care to prolong each day the time during which you leave the canula out, in order that in from five to seven days after the operation the child may be able to breathe through the natural passages.

The medicinal pulverizations, by means of steam apparatuses, render us great service all this time. Having no longer the larynx to traverse, these vapors penetrate profoundly the air-passages, and modify the state of the mucous membrane. You ought, then, to make free use of these pulverizations, and atomizations[1] of chlorate of potash. In fine, an alimentation the most tonic possible, and alcoholic potions are administered to the child.

Such is the operation of tracheotomy; let us see now what results you are to expect from it.

Tracheotomy, as you see, is directed to a symptom, viz.: the asphyxia resulting from the presence of false membranes in the larynx; it has not, remem-

[1] [W. Pugin Thornton has had a syringe made for the withdrawal of membranes or blood from the trachea, different sized flexible nozzles can be adapted to the syringe. In cases of hemorrhage, Trendelenburg's tampon canula may be adapted to Durham's right-angled tube; with the india-rubber bag of the tampon canula distended, blood is prevented from passing down the trachea. The syringe may be of use after the tampon canula is adjusted, to assist in withdrawing the blood which has already passed down into the bronchi (*Vide* Lancet, September, 1881, p. 274., Am. Rep.).—Tr.]

[2] In the infancy of the operation a canula with trocar was used; the trocar was withdrawn after puncture of the trachea, and the canula left in place. In this way Santorio performed tracheotomy. Bretonneau first employed a straight, then a curved canula. Trousseau, following the advice of an officer of the artillery, on whose daughter he operated, made use of the double canula, which enabled him to cleanse the instrument with facility. Lüer gave this canula a bevelled extremity, and made the wings of the canula moveable. Boardillat's canula is composed of two valves which close like a speculum, and which open when they are introduced into the trachea.

According to Lüer, the diameter of the internal canula should be seven millimetres for a child up to three years of age; eight millimetres for a child from three to five years; nine millimetres for a child from five to ten years; ten millimetres for a child from ten to twenty years. For adults the canula should have a diameter of from twelve to fifteen millimetres.

[1] In Germany great account is made of atomized liquids after tracheotomy. These pulverizations have the advantage of keeping the canula always moist, and rendering the frequent removal of this instrument less necessary. Besides the vapor of warm water, some (as Barthels) employ a one per cent. solution of common salt; Fitzau, a weak solution of salicylic acid (one-half per cent.); Pauly, Eidam, and Benson prefer lime-water (aqua calcis), as being the best solvent of false membranes.

ber, the slightest influence on the march of the diphtheria. It simply enables the patient to live pending the abatement and disappearance of the general affection. This first consideration goes to show that the happy results which have been claimed for tracheotomy are in direct relation with the malignity, greater or less, of the diphtheria. When the disease is benign you will save a good many patients, when it is grave you will save only exceptionally a case, and what I have just said finds a striking confirmation in the statistics of the last thirty years.

Trousseau pretended that half the patients were saved. When I was interne of the Hôpital Sainte-Eugénie, in 1860, we saved one patient in four or five. To-day the proportion is still less, and it is as much as ever if we save one patient in six or seven. There are even disastrous periods, as that of last year, when we saw—whether at the Hôpital des Enfants, Rue de Sèvres, or at the Hôpital St. Eugénie—almost all our tracheotomy patients die.[1]

These results do not imply that the treatment is less judicious to-day than it was thirty years ago. This is not the case. They simply indicate a greater malignity of the disease. This shows you once more what I cannot too much impress upon you, that statistics applied to therapeutic methods do not alone enable you to judge of the value of those methods. Moreover, consult the numerous statistics published in the important work of Sanné, and you will see that all arrive at this result; that on an average you may expect one recovery in every five or six tracheotomies.

Another preponderating influence affecting the results of diphtheria is the age of the patients. It may be affirmed that below two years of age recovery is exceptional after the operation. It is now six years that I have been physician of the Hôpital St. Antoine, it is now six years that I direct the service of the "Crèche" [Infants' Hospital], where we receive, as you know, no infants above two years of age, and during all these years we average twenty cases a year of tracheotomy for croup. Very well, we have yet to observe a single case of recovery! This does not mean that children under two years of age cannot be cured, and several writers, and particularly Revillaud of Geneva, have cited several examples. Scoutteten operated with success on his own little daughter aged six weeks, but these are extraordinary cases.[1] Authorities are agreed that the chances of success are the greater the older the child who is the subject of the operation;[2] I say child, for in the case of the adult the chances of recovery diminish.

In order to render the results of tracheotomy more favorable, authorities have attempted to formulate with extreme care the indications and contra-indications of the operation. You will see, gentlemen, that in spite of the numerous tentatives which have been made in this direction, we have no positive data forbidding tracheotomy. Whenever croup manifests phenomena of asphyxia you ought to operate. There are really no contra-indications, for the most serious cases, where all the contra-indications seem grouped together, may get well.

It has, in fact, been said that when the diphtheria tends to invade the nasal cavities, and especially the bronchi, it is no use to operate. This is not so. I have seen children recover after the operation who were affected with both nasal and bronchial diphtheria, and the latter to such an extent as to discharge by the tracheal wound, false membranes that were perfect casts of the bronchial tubes.

It has been said that in the last stage of the disease, and when the child is ready to succumb, it is useless to operate. This, again, is contrary to the facts, for the annals of croup are full of observations

---

[1] We have no reliable statistics of tracheotomy in France of a date prior to 1839. At this epoch, in a discussion which took place in the Academy, they reckoned 138 tracheotomies, and 29 recoveries—1 in 4.75. In 1844, 212 operations were reckoned, 40 recoveries—1 in 5.3. From 1849 to 1858, at the Hôpital d'Enfants, there had been 466 tracheotomies and 120 recoveries, about one-fourth; at the Hôpital St. Eugénie, 198 tracheotomies and 38 recoveries, or 1 in 5.

In the great discussion which took place in 1858 respecting catheterization of the larynx and tracheotomy, Trousseau showed that out of 186 operations there had been 73 recoveries, or 1 in 2.54.

The statistics published by Sanné, at the Hôpital St. Eugénie and the Hôpital des Enfants Malades, show that on an average, from 1864 to 1875 there had been 2,312 operations at St. Eugénie, with 509 recoveries, or 1 in 4.54. At the Enfants Malades, from 1851 to 1875, there had been 2,351 tracheotomies for croup and 644 recoveries, or 1 in 3.82.

Note, moreover, that since these last years, and especially since 1873, the mortality from tracheotomy seems to have increased, for in 1873 recoveries were only 1 in 6.48 at St. Eugénie, and 1 in 4.76 at the Enfants Malades.

Archambault has made independent statistics in these two hospitals for the term of years included between 1866 and 1879, and this is the result which he has obtained: At the Hôpital Enfants Malades, 1,513 tracheotomies and 335 recoveries, or 1 in 4.5; at St. Eugénie, 2,154 operations and 454 recoveries, or 1 in 4.6.

In Portugal, according to Sanné, tracheotomy has given better results—21 recoveries out of 59, or 1 in 2.80.

In Spain tracheotomy is only exceptionally practised.

In Belgium (Hospital St. Peter in Brussels), from 1870 to 1875, out of 38 cases there were 8 cures, or 1 in 3.50.

In Switzerland, according to the statistics of Billroth, Revilland, d'Espiné, Picot, and Rapin, 148 tracheotomies and 57 recoveries, or 1 in 2.59.

In Germany, according to the statistics of Bartels, made at the Grand Hospital of Bethanie, from 1861 to 1872, out of 385 tracheotomies there were 105 cures, or 1 in 3.25; and, according to the total statistics given by Sanné, out of 812 operations there were 297 recoveries, or 1 in 2.97.

In England the results of the statistics of the hospitals give 1 recovery to every 5 cases. Statistics of private practice in the cities speak more favorably for the operation—60 recoveries out of 185 tracheotomies, or 1 in 3.86.

In America, according to the statistics cited by Sanné (Traité de Diphtherie), and borrowed from the memoir of J. Solis Cohen, of Philadelphia, out of 325 cases of tracheotomy performed in America, there were 84 recoveries, or 1 in 4.86.

The following are Kroenlin's statistics of tracheotomy, account being here rendered of the results of surgical treatment of diphtheria from 1870 to 1876, at the surgical clinique of Langenbeck: Children of one year and under, a mortality of 84 per cent.; children of eight years, 44 per cent.; adults, a mortality of 25 per cent. Total mortality of tracheotomy, 78 per cent. 11 out of 85 under two years recovered. The youngest infant that got well was six months.

When the operation is put off to too late a period, the mortality is 99.9 per cent. In the greater number of cases the canula can be removed the fifth or seventh day. A good many patients, however, die after this epoch.

All the operations of tracheotomy were peformed with the bistoury. The incision was in every instance made at the upper part of the trachea. Chloroform was employed in every case where asphyxia was not imminent (Kroenlin: Diphtheritis and Tracheotomy, Arch. für Klin-Chirurg., Vol. XXI., fas. 2, p. 253, 1877).

[In this connection it is proper to call attention to the valuable papers on Tracheotomy in Croup by Dr. John H. Ripley, published in this journal for 1880, Vol. 18. The results of Dr. Ripley's statistics are rather more favorable—*i.e.*, twenty to thirty per cent. of cases reported by him recovered. Dr. Ripley considers tracheotomy always a justifiable procedure in croup if the paramount feature in causing death be apnœa.—Tr.]

---

[1] [To the instances on record (only seven or eight) of successful tracheotomy where the patient was under two years, we must add the recent operation performed by Dr. George F. Shrady, of New York, on an infant eleven months old. The child recovered after a severe struggle with the disease. Vide MEDICAL RECORD, November 4, 1882, p. 512.—Tr.]

[2] That the chances of recovery after tracheotomy are generally in the ratio of the ages of the patients is apparent from the following tables:

(*a*) Jacobi of New York, sixty-six tracheotomies, thirteen recoveries, ages as follows:

Age.	Tracheotomy.	Recoveries.	Percentage.
2 to 3 years.....	5	1	20
3 to 4 years	16	3	16
4 to 5 years.....	23	7	30
5 to 6 years.....	7	2	28

(*b*) Hôpital des Enfants Malades, Paris:

Age.	Tracheotomy.	Recoveries.	Percentage.
1 to 2 years.....	10	1	10
3 to 5 years.....	359	68	18
6 to 10 years.....	122	68	55
11 to 15 years.....	3	0	0

when tracheotomy has produced a veritable resurrection. It has been said also that in malignant diphtheria it is of no use to operate. This is very generally the case, for the whole organism being poisoned by the virus, the individual dies before false membranes have had the time to invade the larynx, and if there are asphyxiating phenomena, they are due to tumefactions of the glands, and the dyscrasic condition of the blood; the indication for tracheotomy is wanting. As you see, there are no contra-indications, properly speaking; all that you can say is that the chances for tracheotomy are more or less favorable according to the age of the child, the extent of propagation of the false membranes, the morbid genius of the epidemic, and finally the period of the disease when the operation is performed.

In fact, the period chosen has much to do with the success of the operation, and if it is not well to wait till the last stage of the malady, it is well not to be too hasty, for croup is susceptible of spontaneous recovery. Here then is, in brief, the line of treatment which I advise.

When you are in the presence of a patient affected with croup, you commence by giving an emetic, with directions to have it renewed when the urgency of the case shall demand; you also order pulverizations with chlorate of potash or antiseptic solutions; you watch carefully the temperature and respiration of the child; you keep informed by these and other particulars as to the state of the circulation, and you have care to maintain as tonic a regimen as possible; then if you observe that in spite of this medication, the attacks of dyspnœa become more frequent, the temperature rises, the oppression augments, the child takes on the pale, leaden hue of slow asphyxia, *then* it is your time to intervene.

These rules apply to every case whose evolution you may have been able to follow from the commencement to the moment of your intervention. But when you are called in during the asphyxiating period of croup, you ought to forewarn the family that surround you, and anxiously await the result of your examination, that tracheotomy gives the only chance of life to the patient. You should add, moreover, that the chances are doubtful at the best, and yet, that they may expect for a day or two, at least, from the operation, a real relief and amelioration.

I have just shown you, gentlemen, how tracheotomy should be performed. I ought, in concluding, to indicate the complications that may follow the operation. These complications are of several kinds. Some result from the wound which you have made in the skin and trachea, others from propagation of inflammatory or diphtheritic trouble to the lungs.

As for the first, you will occasionally see phlegmonous erysipelas, ulcerations of the skin and of the trachea—all complications of greater or less gravity, which will claim at your hands earnest and minute attention.

As for the second, it has been maintained that tracheotomy predisposes to broncho-pneumonia. This is, I believe, an affirmation which lacks proof, for when this operation is performed in cases that are not diphtheritic, it is rare to see phlegmasia of the lung supervene. It is then to the diphtheritic disease that we must attribute the greater part of those secondary broncho-pneumonias, which we so often see ensuing in the final periods of the malady.

After having operated on your patient by tracheotomy, after having by a most precise and careful treatment cured the laryngeal diphtheria, do not take for granted that all is done. Another series of accidents may supervene which will still put the life of your patient in jeopardy. These tardy complications of diphtheria are of different sorts. I have already spoken to you of the paralysis,[1] so grave, which may accompany diphtheria; I will add albuminuria, and all the evil consequences which it brings. In fine, I will mention the exuberant outcropping of granulations on the tracheal cicatrix, and which produces in certain cases, as Peter and Krishaber have shown by examples, asphyxia and sudden death.

These considerations, gentlemen, terminate what I wished to say *a-propos* of croup and its treatment. As in my lectures on pleurisy and pleuritic effusions, I dwelt at length on thoracentesis and the operation for empyema, so in this lecture I have deemed it for your interest to devote the larger part to tracheotomy. I know too well, from having experienced them myself, the anxiety and the hesitation which the young practitioner experiences when called to face emergencies such as I have described. He ought to be guided, encouraged in the course which he should take, and this is what I have endeavored to do in describing thus minutely the operation of tracheotomy. But let him be assured, and with these words I desire to finish, that whatever may be the skill with which he performs the operation, however great his zeal and devotion in the consecutive treatment, his success will not so much depend on his exertions as on the nature of the epidemic which prevails at the time of the operation.

A Convenient and Delicate Test for Albumen.—Dr. A. W. Abbott, of Minneapolis, Minn., sends us the following description of an easy and delicate method of testing albumen:

"Pour a few drops of urine gently down the inside of a glass vessel containing acidulated water at the boiling point. If albumen be present a more or less dense cloud will form just at the dividing line between the fluid tested and the clear water above. As the contrast in opacity is between the clear water and the milky albuminous cloud, the test is very delicate, one-twentieth of one per cent. of albumen making a very perceptible clouding. It has all the advantages of the ordinary heat and acid test and Heller's nitric acid test. It is even better than the latter in a cloudy fluid as in urine, with urates in excess, because the clear water above makes a perfect medium in which to detect the faintest cloud, while the layer of coagulated albumen in Heller's test may be entirely obscured by the opacities in the fluid itself. If no test-tube or nitric acid is at hand, pour boiling water into a common tumbler, let it stand a moment to ensure the heating of the bottom of the tumbler, empty, refill, acidulate with *vinegar*, and proceed as before. While this is a modification of the heat and acid test it has the advantage of being applicable under all possible circumstances, whether special apparatus is at hand or not. It is as convenient and accurate in the farm-house as in the laboratory."

---

[1] Diphtheritic paralysis, and in particular that which affects the pharynx, is a grave complication in the case of tracheotomized children. It not only prevents feeding, but we have even seen, in certain cases, foods and drinks pass out by the tracheal wound. Several measures have been proposed to obviate this inconvenience. Perin advises to place the patient on his abdomen and make him swallow his nourishment with his face toward the floor. In these cases the most efficacious way to feed the child is by the stomach-tube of Faucher.

Original Communications.

ON ABSTRACTION OF BLOOD FROM THE RIGHT HEART,

As a Means of Relieving Intense Pulmonary Congestion.

By BENJ. F. WESTBROOK, M.D.,

LECTURER ON ANATOMY AT THE LONG ISLAND COLLEGE HOSPITAL; PHYSICIAN-IN-CHIEF TO THE DEPARTMENT FOR DISEASES OF THE CHEST, ST. MARY'S HOSPITAL, BROOKLYN.

About a year ago, while engaged in the demonstration of the anatomy of the thoracic viscera, it occurred to me that in a case of very acute and intense pulmonary congestion, with over-distention of the right side of the heart, it would be practicable to withdraw a quantity of blood directly from the heart, and so restore the equilibrium of the lesser circulation.

In order to have some exact anatomical data for the discussion of the question of the accessibility of the organ and the determination of the proper point for puncture, I have made, during the year, a series of dissections of bodies of those who have died of various diseases. Though my observations are not yet sufficiently numerous to justify their publication, they have been carried far enough to enable me to describe a mode of procedure which may safely be undertaken by any one who is competent to make an ordinary physical exploration of the chest.

The *right auricle* is the most available point for tapping, inasmuch as its position is less variable than that of the ventricle, and its accessible portion more globular, with a greater antero-posterior diameter to allow of free penetration of an instrument without danger of its passing through into the posterior wall. As an additional advantage, the walls are thinner than those of the ventricle, and not beset by the projecting fleshy columns and papillary muscles which exist in the latter.

In order to determine the best point for puncture I have measured the extent to which the auricle projects beyond the right border of the sternum in the different intercostal spaces, its perpendicular depth from the anterior surface of the sternum at its right edge, the amount of overlapping of the anterior border of the right lung, and the course of the internal mammary artery and vein. The variation in regard to all these points except the last is very considerable in different subjects, and under different conditions of circulation and of the respiratory organs; but I am, nevertheless, enabled to state, with a considerable degree of certainty, the following propositions:

First.—The right auricle projects to the right about equally in the third and fourth intercostal spaces.

Second.—Its perpendicular depth varies greatly, according to its distention and the condition of the left heart and lungs.

Third.—The projection to the right is greatest, and the perpendicular depth least when the right heart is distended, as in death from coma and asphyxia.

Fourth.—The internal mammary vein, which lies upon the sternal side of the artery, is very constant in its course, and situated, on an average, about one centimetre external to the right border of the sternum.

Fifth.—The anterior border of the right lung almost always extends inward beyond the border of the sternum, reaching, or even passing the median line in many subjects.[1]

An instrument inserted into either the third or fourth intercostal space, at the right edge of the sternum, and carried directly backward in a plane parallel to the median plane of the body, will, after piercing both layers of the pleura and the lung, enter the pericardium and penetrate into the right auricle. This would occur in almost any thorax when the heart was not displaced by pressure from pleuritic effusion, contraction of the lung, or other similar conditions. I say *almost any*, because, in one case of marked emphysema, with a depressed diaphragm[2] the upper limit of the auricle was at the middle of the third interspace.

The conditions alluded to as displacing the heart are all readily diagnosticated by those skilled in auscultation and percussion.

The third interspace is better suited for the puncture, for two reasons: first, because it is much wider than the fourth, and the needle passes with less difficulty; second, because the line of the fourth would direct the needle more toward the auriculo-ventricular opening, where it might come in contact with the tricuspid valve. The necessity for going directly backward, in a line parallel to the median plane, will appear further on.

The pressure in the right auricle, in cases of considerable obstruction, though it *departs* from the normal negative standard, does not rise sufficiently to be relied upon to force blood out through a small canula with any degree of rapidity, hence it is necessary in introducing a tube to have it connected with a vacuum chamber, in other words, it is necessary to operate by means of aspiration.

When these points were satisfactorily settled, a further question arose, as to the danger of leakage, occurring from the orifice of puncture.

This was deemed improbable, on the ground of experimentation and of comparison with the results of puncture of other hollow viscera. As I was anxious, however, to avoid every possible risk of increasing the peril of any patient, I chose for the subject of the operation, which I am about to describe, a case in which all chance of recovery had disappeared.

The patient was a German, fifty years of age, the father of a family of healthy children. He had always been strong, though not plethoric, was very temperate in his habits, and had not been sick for twenty years. On November 10th, he had a slight chill, followed by fever and severe lancinating pain in the right side. He sent for the family physician, Dr. Paul H. Kretzschmar, who attended upon him, and from the above symptoms, and a loud friction sound, diagnosticated an acute pleurisy in the lower portion of the right chest. On the following day the rusty sputa of pneumonia appeared, and on auscultation, bronchial respiration was found in the upper portion of the right lung. But, though the apex was the seat of the most active pneumonic inflammation, the pulse was full and bounding, the delirium active, and the fever of the sthenic order. As hepatization occurred, the fever did not abate, but the disease steadily advanced. The rusty sputa

[1] While these propositions are based upon actual dissections, I claim no originality for them, as they are mainly confirmatory of the observations of other anatomists, though no one, as far as I know, has investigated the subject from the same standpoint.

[2] The term *depressed* diaphragm is partly relative; the change of position is largely due to elevation of the ribs.

continued to be quite copious until the 15th, when they diminished materially, and the cough became less frequent and less effectual.

On the 15th, Dr. Kretzschmar requested me to see the patient with him, as he had become alarmed by the persistence of the severe symptoms, as well as by the fact that the respiratory murmur upon the left side was becoming rough with an occasional moist râle. On the morning of the 14th, the temperature had been at 102° F., the pulse 132 per minute. In the evening the temperature had risen to 104°, pulse 140, and respiration 28. On the morning of the 15th, the temperature was 101½°, pulse 134, respiration 27.

At six P.M., when I first saw him, the record was temperature, 103¼°; pulse, 140; respiration, 28. The breathing was very labored, and loud, mucous râles could be heard from any part of the room. The countenance was anxious and the mind wandering. The pulse was of fair strength and regular. On examination of the chest, we found dulness on percussion over the entire *right* side anteriorly and laterally, most marked above the fourth rib. Typical bronchial respiration extended from the clavicle to the third interspace, while, below, there was a mixture of large and small moist râles and friction sounds. The *left* side presented the usual evidences of compensatory respiration, viz., increased resonance, and exaggeration of the vesicular murmur, together with some roughening in places, and a few moist râles. The cardiac impulse was strong, the epigastric pulsation well marked, and the distention of the right side so considerable that its movements could be felt in the third and fourth right intercostal spaces. The second sound over the pulmonic area was very much accentuated.

As the patient was a man of vigorous frame, bearing the struggle well, as shown by the force of the heart, and the slowness of the labored respirations, we concluded that, though very serious, his condition was not hopeless, and endeavored by stimulation, nourishment, and counter-irritation to help him to recover the equilibrium of his circulation. He was ordered the following mixture:

℞. Ammon. carb..... ʒij.
Tr. digit..... ♏xlviij.
Tr. opii..... ♏xij.
Tr. nuc. vom..... ♏xvj.
Aqua. menth. pip..... ʒj.
Sig.—One teaspoonful every hour.

He was also to have a tablespoonful of brandy every hour.

On the following morning, at 9.30, we found him in much the same condition, only a little weaker; temperature, 100¼°; pulse, 128; respiration 36. The temperature and pulse had fallen somewhat, but the respirations were more rapid and noisy. He coughed but little, and expectorated a little tough bloody mucus. However, as the heart retained its strength and the temperature was lower, we still had a slight hope, and continued his treatment with the addition of a little more alcoholic stimulant.[1] At 2 P. M. I saw the case in Dr. Kretzschmar's absence. He had lost perceptibly since morning. The temperature was 101½°, pulse 140, respiration 45, and very labored. Moist râles were increasing upon the left side, and the breathing was harsh and indicative of considerable bronchial congestion. His pulse was still remarkably strong, but quick and nervous with an occasional intermission. The respiratory muscles kept at their task with remarkable vigor, but the struggle was evidently hopeless. It was plain that there was no longer any chance of recovery, nevertheless I hesitated to attempt any operation in the absence of the physician in charge, though Dr. Kretzschmar had signified his desire that I should do whatever seemed best. Accordingly I ordered ten drops digitalis to be given every hour in addition to his other medication. On my return at 6.30, the pulse had risen to 150, respiration 40. and there was no sign of improvement.

After consultation with my friend and assistant, Dr. Emilio Buchaca, who accompanied me, I proceeded to attempt the aspiration of blood from the right auricle with a view to unload a part of the burden under which the heart was staggering. We used for the purpose one of Codman's aspirators, manufactured by Geo. Tiemann & Co., selecting the finest needle, which was about twice the calibre of an ordinary hypodermic needle (.75 mm.). The instrument worked well, and a good vacuum was secured. The needle was then warmed over the chimney of a student lamp, and passed through the third intercostal space. close to the edge of the sternum, to the depth of about five centimetres, when it communicated to the hand the sensation of being in the auricle.

The sensation referred to is that familiar to every surgeon, by which we know that the point of the instrument has passed into a cavity or fluid; with the addition of the motion of the auricle, which causes the needle to move slightly to and fro with the pulsations of the heart. The stop-cock connecting with the vacuum was then turned, but only a few drops of blood fell into the bottle. Thinking that I might be mistaken as to the whereabouts of the needle, I passed it a little farther, when it entered a hard substance that felt somewhat like soft spongy bone, or calcareous matter, and its point began a series of such active movements that it was evident that it had punctured the aorta. It was withdrawn a little way and replaced in the auricle, but though the suction was increased by more pumping, only about a drachm of blood was abstracted, and finally, not daring to leave the needle longer in the heart, for fear of coagulation upon it, I discontinued the operation. The introduction of the needle, which was very sharp, occasioned no more pain than does that of the hypodermic syringe, and its entrance into the heart was accompanied by no unpleasant symptoms; indeed, the heart's action did not seem to be affected at all When the aorta was punctured the patient complained of a feeling of distress in the sternal region, and remarked that he thought I had struck a bone.

The failure of the operation was due to two causes: first, in order that the needle should impinge as squarely as possible upon the convex auricle, I directed the point a little inward, which caused it to penetrate at the base of the auricular appendix, and, when more deeply inserted, to perforate the latter and strike the outer side of the aorta. The second cause of failure was that the needle selected was too small, and the blood could not be delivered very rapidly through it, so that it coagulated in the rubber tube above.

I hesitated to repeat the operation at once, but preferred to wait a sufficiently long time to see if the first attempt was to be followed by any bad effects. After waiting half an hour, and observing none, I took my departure, promising to return

[1] The brandy ordered the night before had not been regularly administered.

later in the evening. At seven o'clock Dr. Kretzschmar called and found the patient much as I had left him; pulse, 150; respiration, 40. There were no sensations referable to the puncture. At 10.45 P.M. we saw him together. The pulse was 144, respiration, 44. We determined to make another attempt at local bleeding, as a *dernier ressort*. I selected a needle, the outside diameter of which was 1.5 mm. This was thoroughly cleaned, heated over the lamp chimney, and introduced through the third intercostal space, directly backward, till, at a depth of about 5 ctm., it was free in the cavity of the auricle. The cock was then turned and the blood ran freely into the bottle. No pain or distress was experienced during the operation. After abstracting a little over three ounces of blood I withdrew the needle. It was followed by a few drops of very dark venous blood. A towel was applied to the spot for a moment, after which there was no further oozing. Five minutes after the operation the pulse was 150; respiration, 40. At the end of half an hour the pulse was 148; respiration, 40. The character of the pulse, however, was somewhat changed; instead of the quick, hard, nervous beat, it was softer and less irritable; there was no intermittence. When asked how he felt, he simply said: "I feel better." We then ordered him the following prescription and withdrew:

℞.	Ammon. carb.	ʒ iss.
	Tr. digitalis.	ʒ iiss.
	Tr. nucis vom.	ʒ ss.
	Tr. opii.	♏ xxiv.
	Spts vini rect.	ʒ iij.
	Tr. cardam. co.	ʒ iiss.
	Syr. pruni virg.	ad. ʒ vj.

M. Sig.—One tablespoonful, in water, every hour.

Dr. Kretzschmar saw him at seven o'clock on the following morning. The friends said that he had been more comfortable during the night than for the three or four days previously, so much so that they had begun to entertain hopes of his recovery. Dr. Kretzschmar, however, was unable to confirm their hopes, for on auscultation he found numerous moist râles in the left lung, which was becoming œdematous. The pulse at this time was 138, and the respiration 38 per minute.

He remained in about the same condition until half-past ten, when he suddenly became restless, rolled over to the back of the bed, rose up on his elbow, and fell back dead.

The autopsy was made on the following day, thirty hours after death. On examination two minute spots, indicating the points of puncture, were found in the skin at the side of the sternum in the third interspace. The deeper layers of the skin, superficial fascia, and pectoralis major were infiltrated with blood in a district one-fourth of an inch in diameter.

The costal and visceral pleuras, three-fourths of an inch from the anterior border, also bore a slight blood-stain about one-half inch by three-fourths of an inch. The slight hemorrhage had come from a small branch of the internal mammary vein, which ran inward toward the sternum (perforating branch). On the posterior surface of the edge of the lung there was a slight roughness at a point corresponding to the mark of puncture on the anterior surface, bnt no distinct trace of the passage of the needle could be discerned. Immediately below this point on the mediastinal pleura were two minute red dots, one about one centimetre nearer the median line than the other. These dots were about five millimetres in diameter, but the inner one was a little the larger. The inner surface of the parietal pericardium presented two dots corresponding to these just described. On the auricle it was impossible to identify the site of penetration unless by comparison with the spots on the pericardium, except that corresponding to the innermost spot there was a very indistinct roughness of the surface, as if from a slight scratch. This was at the base of the auricular appendix. Drawing the appendix outward, I found in the outer side of the aorta, near its base, a round, dark-red mark three millimetres in circumference in the adventitia. This was, no doubt, the place where the needle struck the aorta after piercing the auricle. No corresponding mark could be found on the inner coat. The pericardium contained from three to four fluidounces of thin serous fluid of a dark claret color. It was not distended, as its anterior portion lay in contact with the right ventricle. Along the inferior border of the heart lay a filament of coagulated fibrin one and one-half inch long and very narrow. Its color was a pinkish white. A thin, membraniform, pinkish white coagulum was spread out upon the anterior surface of the right auricle, in its lower and internal half, extending into the auriculo-ventricular groove, where it became thicker and darker. The whole amount of coagulum might have represented two or three drachms of blood, at a very liberal estimate, but my impression is that some of it was due to inflammation, for the right side of the pericardium adjacent to the inflamed pleura showed some thickening. We were, however, unable to make any microscopical examination of the fluid, owing to the difficulties attending the getting and making of the autopsy. All the cavities of the heart were distended with black clots, which occupied the venæ cavæ, pulmonary veins and artery and aorta. In the right ventricle we found a small, whitish coagulum clinging to the columna carneæ, but not extending into either the auricle or pulmonary artery.

The upper lobe of the right lung was passing into the stage of gray hepatization. The pleura, over the entire surface was very red and thick, though masses of coagulated lymph covered its surface below the second rib. The base of the lung was almost black, partially collapsed at the periphery, and covered by thick curdy masses, such as are found in the most acute and pronounced pleuritis. This condition also extended to the mediastinal pleura. There was very little fluid in the pleural sack. The left lung was universally adherent from an old pleurisy. It was dark, and oozed black blood upon section. The bronchi contained a good deal of frothy muco-pus, slightly tinged with blood.

The important points established by this operation are: in the first place, that the right auricle may be readily aspirated, and secondly, that the introduction of a canula into its interior is not accompanied by any alarming symptoms, or followed by any unhappy results. I am convinced, that had the operation been done earlier, say on the 14th or even on the 15th, and had a larger quantity of blood been removed, the prospects of recovery would have been greatly enhanced. But, as already remarked, I did not feel justified in making the first attempt upon any one who had the slightest chance of recovery. The reason for withdrawing the needle before a larger quantity of blood was abstracted, was that, although it would be perfectly safe to leave the instrument in the heart of a healthy animal for a much longer

time, I was not sure that the blood of the pneumonic subject would not coagulate upon the needle, but at another time I should not hesitate to leave it long enough to withdraw at least eight or ten ounces.

The length of time the needle remained in the heart was not ascertained, but it was probably not over half a minute.

The slight amount of leakage that occurred was undoubtedly caused by the first puncture, when the needle was moved to and fro by the pulsations of the aorta, and allowed of oozing by its side. At the second trial the needle was held firmly in one place, and I do not think that there was any leakage.

ON THE TREATMENT OF CONGESTIVE HEADACHE.

By J. LEONARD CORNING, M.D.,

NEW YORK.

If we examine the literature of our theme we are astounded by the apparently hopeless confusion in which the whole is involved. Everywhere attempts at ill-founded generalization are encountered. We are compelled to admit, after perusing long debates in regard to the relative merits of various therapeutic measures, that those who were foremost to disparage the treatment pursued by others, were totally ignorant of the fact that those same symptomatic manifestations which they were considering might be owing to entirely different causes from similar conditions described by others. Hence a commensurate modification in therapy might not only be admissible, but eminently desirable. It is more especially of recent years that a laudable attempt to differentiate the various etiological factors involved in different forms of headache has been made. In 1832, Dr. James Mease, of Philadelphia, published a monograph on "The Cause, Cure, and Prevention of the Sick-Headache," which is substantially a treatise on the dietetics of this particular form of headache. The work, however, is conspicuously lacking in those philosophical qualities which are so necessary to a true understanding of the questions involved. Dr. E. H. Sieveking published in 1854[1] a most interesting paper on "Chronic and Periodical Headache." The views therein expressed are remarkable for their succinct and thoroughly scientific elucidation of the two great physiological principles involved in the consideration of by far the greater majority of instances of cephalalgia. I refer namely to the importance ascribed by this eminent physician to the fluctuations of the blood-stream within the cranial vault. In speaking of this subject Dr. Sieveking says: "Nothing is of more importance in reference to the pathology and therapeutics of the head than clear and well-defined notions on the physiological subject of the circulation within the cranium; for, among the various sources of medical scepticism, no one is more puzzling or more destructive of logical practice than a contradiction between the doctrine of physiology and the daily practice of medicine."

What Dr. Sieveking said in 1854 holds equally good to day; and, indeed, the position then taken has received substantial indorsement through the positive results of more recent experimental physiology. Conspicuous in this connection are the inductive researches of Durham, Fleming, and Hammond, touching the modifications in the cerebral circulation during sleep and wakefulness. By these experiments it has been conclusively proven that the amount of blood in the brain is decreased during sleep and increased during wakefulness. More recently I have had occasion to confirm the experiments of Fleming in this direction, and have published the results of those researches in various papers and articles.[1] "What Hippocrates said of spasm," says Dr. Sieveking, "that it results either from fulness or emptiness, or, to use more modern terms, from hyperæmia or anæmia, applies equally to headache; but, to embrace all the causes of this affection we must add a third element, which, though most commonly complicating one of the above circumstances, is not necessarily included in them, namely a change in the constitution of the blood." While I agree with Dr. Sieveking as regards the importance to be ascribed to the first two factors —cerebral hyperæmia and anæmia, in the production of the group of symptoms known as "headache" —I fail to perceive why especial prominence should be given to the third condition mentioned by Dr. Sieveking. Indeed, I am quite unable to imagine how the periodical, and more especially the intermittent form of headache, is to be explained by what Dr. Sieveking describes rather ambiguously as a "change in the constitution of the blood." It is quite evident, admitting that such a change is capable of producing an amount of cerebral irritation sufficient to develop well-marked cephalalgia, that the latter must of necessity be within certain limits continuous. This is not the case, as the causative factor is constant and not fluctuating. I am, therefore, not prepared to accept this third causative factor, without question. Nevertheless I am perfectly willing to admit that other factors besides cerebral hyperæmia and anæmia may produce the functional variety of headache. There would seem to be ample ground for ascribing great causative importance to excessive irritation of the brain plasma itself. Hence, those forms of headache which, while being unaccompanied by any especial circulatory derangements, succeed, oftentimes, with relentless regularity upon any considerable degree of mental work. It is not my purpose to discuss the treatment of the multifarious forms of cephalalgia on this occasion, did time permit. As regards the so-called "neuralgic" variety, I must content myself by referring to the admirable work on "Neuralgia and Kindred Diseases of the Nervous System," by Dr. John Chapman of London, in which will be found many interesting facts bearing on the question. Accepting the propositions, then, that the more adjacent causes of headache are, (1) cerebral hyperæmia, (2) cerebral anæmia, and (3) irritation of the cerebral plasma itself, let us now consider how these morbid factors are most scientifically and speedily met at the bedside; and how, more particularly, those distressing conditions of engorgement, which are so baneful an item in the causation of a certain form of cephalalgia, are best overcome.

Two years ago I began a series of experiments on epileptics and maniacs, which involved the application of protracted pressure to the common carotid artery on both sides. In the course of these experiments the thought suggested itself that suppression of the carotids might prove a salutary means of reducing that form of cerebral congestion

[1] On Chronic and Periodical Headache, by E. H. Sieveking, M.D., Medical Times and Gazette, London, August 12, 1854.

[1] *Vide* Carotid Compression and Brain Rest, by J. L. Corning, M.D. New York: Anson D. F. Randolph & Co.

which is so prolific a source of headache and vertigo. Accordingly I made a protracted series of experiments with carotid compression upon those suffering from congestive headache, and I can only say that I have been so far pleased with the uniformly good results obtained, that I have felt it a duty to call the attention of the profession to a procedure which, for obvious reasons, possesses all the advantages of local depletion by leeching or cupping, without the manifest disadvantages of either of these methods. The instruments which I have devised as substitutes for the primitive procedure of digital compression of the carotids have already been described in former communications. It is only necessary to say that the implements in question are of two kinds: one, the "carotid fork," is an adjustable instrument, which being held in the hand of the operator, permits him to exert any degree of pressure upon both carotids for any desired length of time. The other instrument, which I have designated as the "carotid truss," for lack of a better name, is a circular spring provided with adjustable pads at each extremity. The spring is placed about the neck of the patient, and by suitable appliances the pads at the extremities can be placed directly above the trunks of the two common carotid arteries. By turning the screws to which the pads are attached the desired amount of pressure can be applied to the arteries, and the apparatus can be worn for any length of time by the patient.

With these instruments I have frequently succeeded in arresting the most obstinate form of congestive headache in an incredibly short time (on one occasion in about five minutes). Where, however, the headache is of manifestly nervous origin and uncomplicated by any especial circulatory derangements, I have never been able to achieve notable results with this method. Indeed, pressure upon the carotids is an excellent method of differentiating the congestive form of headache from the nervous varieties of head-pain.

Of galvanism this much may be said, that it is one of the most valuable methods which we possess for treating the form of headache under consideration, for not only does it cause contraction of the smaller arteries, but it also exerts a soothing influence upon the plasma of the brain itself.

A powerful therapeutic agent, and one which has been more or less extensively employed in the treatment of various forms of head and spinal symptoms is cold.

A very excellent method of applying both cold and galvanism to the head, at the same time, is afforded by a species of refrigerating electrode, designed by myself for this purpose. The apparatus in question consists of a concave sponge electrode, the concavity of which corresponds to the convexity of the external aspect of the cranium. Above the electrode is a chamber of metal or india-rubber, designed to contain ice. The whole is secured to the head of the patient by a single chin-strap, and connection established with an ordinary galvanic battery by means of an appropriate clamp and insulated cord. The indifferent pole is applied over the sternum or other convenient point. Care should be taken not to employ too strong currents, as otherwise vertigo and other unpleasant symptoms may be produced. An application of from five to ten minutes is usually sufficient to arrest the head-pain. As an additional security it is well to recommend the patient to take a hot foot-bath, and to remain as quiet as possible for twelve hours succeeding the treatment. In hyperæmic headache cupping and blood-letting have been recommended; but as a rule both procedures are not only unnecessary but positively inadmissible, as exclusion of the superfluous amount of blood by compression upon the carotids, followed by a corresponding dilatation of the peripheral circulation by means of the foot-bath, will almost always be sufficient to cause a permanent cessation of the symptoms. Among the internal remedies which may be employed with good effect, in certain cases are, aconite, bromide of potassium, and Indian hemp. The inhalation of from five to ten drops of chloroform is an excellent expedient in some instances. Chlorodyne, which is nothing more than a mixture of sedatives, often works well, and indeed frequently excels other remedies. The regulation of the heart's action is also of very great importance in these cases, and the physician should have no hesitancy in resorting to such remedies as digitalis and belladonna for the purpose of reducing the tension in the domain of the cerebral circulation. As a matter of course the digestive functions should be carefully looked to; the bowels should be kept open, and in all cases where there are indications of a congestive origin, alcohol in all forms should be absolutely forbidden.

A CASE OF LITHOLAPAXY,

INCLUDING THE CRUSHING AND REMOVAL OF A PHOSPHATIC CALCULUS, AND THE CUTTING UP AND REMOVAL OF ABOUT SIX INCHES OF AN ENGLISH WEB CATHETER.

BY HOLT C. WILSON, M.D.,

PROFESSOR OF SURGERY, WILLAMETTE UNIVERSITY, PORTLAND, OR.

MR. B——, farmer, aged forty-two, a resident of Washington Territory was admitted to the Good Samaritan Hospital, some time in June, 1882, and gave the following history: About one year previous to admission was struck across the back by a falling tree, and as an immediate result of the injury became paralyzed in the lower extremities, with accompanying paralysis of bladder and rectum. The patient was given a No. 8 English web catheter by a physician, who, living at a distance, could not attend regularly, and instructed in its use. After some time the catheter became cracked and rotten, and one day, about four months after the injury, while in the act of withdrawing it, being accidentally jolted, it broke short off, about one inch from the meatus, leaving in the canal from four to six inches of its length.

Efforts on the part of a physician and others to seize the stump, failed, and during the manipulations, the instrument slipped into the bladder. From that time on Mr. B—— suffered more or less acutely from cystitis, the bladder being already in an unhealthly condition from insufficient drainage. From time to time, previous to admission, bits of phosphatic deposit and fine shreds of catheter had been passed, the bladder gradually regaining power, rendering micturition possible.

Exploring with a Thompson's stone-searcher, I touched a calculus immediately. Bearing in mind the friability of the catheter, I felt assured that with a proper lithotrite, I could cut it into pieces, after crushing the stone. On experimenting with a piece of rotten catheter, using Thompson's litho-

trite, found that it would cut it into three pieces, one piece dropping to either side and the other passing through the fenestrum. The operation was unavoidably postponed for three weeks, until Bigelow's apparatus could be sent to me, patient's condition in the meantime became bad, and somewhat alarming. Had at intervals severe rigors and high fever, urine also greatly decomposed and fetid. Condition improving somewhat, determined to operate without further delay, so, July 25th, patient was etherized and placed on the table, and in the presence of several physicians, who rendered important assistance, I proceeded with the operation. Found that a curved catheter, No. 27 French, would pass; divided the meatus in the hope of passing a No. 31 straight catheter; but the urethra would not admit it; hence used the No. 27 curved. After washing out the bladder with a strong solution of borax, leaving in about three ounces of fluid, I introduced the lithotrite, seized the stone with no difficulty, the jaws of the instrument showing the diameter to be three-fourths of an inch. After moving the instrument gently from side to side, and finding the movements free, screwed the blade home, crushing the stone easily, and cutting the catheter as with a knife. No clogging whatever. It (the catheter) could be recognized by the elastic resistance at first offered, followed by a sudden giving way. Seizing the different fragments as rapidly as possible, crushed as before. After twenty minutes the lithotrite was withdrawn and catheter introduced, much *débris* dropped into the bottle, calculus material and pieces of the catheter, incrusted; slight amount of blood also. Reintroduced the lithotrite, divided other pieces and washed as before. Nothing more being discovered by the instrument, and the water coming clear from the bladder, operation was suspended. More time was consumed than ordinarily required, because of the difficulty experienced in seizing the oblong oval pieces after the calculus material had been worked off. Patient then put to bed, and ten grains quin. sulph. ordered morning and evening. No bad symptoms ensued, and patient was up and about in his perambulator after three days, feeling, as he expressed it, perfectly well. In a week from date of operation I washed out the bladder with the evacuating apparatus, in order to be certain that nothing remained, and discovered the presence of a remaining bit by the characteristic click against the end of the catheter, as the force of the water in returning carried it against it. So without etherizing the patient, introduced the lithotrite, and succeeded in seizing this remaining piece after a little manipulation, divided it once, withdrew the instrument, and the two fragments came out through the catheter into the bottle at the next washing, clearing the bladder of its unwelcome visitor. At this date, November 10th, the bladder is in a normal condition, urine clear, no traces of catheter or calculus could be discovered in repeated washings.

Result shows what can now be accomplished by litholapaxy in cases formerly requiring lithotomy.

THE CAUSE OF SICK-HEADACHE.—The fact long known to the profession, that errors in visual refraction may cause sick-headache, is now being widely circulated again. Hypermetropia and astigmatism are the things that most often have to be corrected.

Progress of Medical Science.

TETANUS FROM SLIGHT CAUSES.—Two cases of fatal tetanus, induced by slight injuries, are reported in the *Maryland Medical Journal* of October 1, 1882. The first case is related by Dr. H. J. Berkeley. The patient, a strong healthy man, forty years of age, was vaccinated in January, 1882. A few days later, after exposure to cold, the arm became swollen and inflamed. Three weeks after the vaccination had been performed symptoms of tetanus appeared and continued to increase in severity for several days, until death ensued. The second case, reported by Dr. R. B. Davy, was that of a woman suffering from a uterine polypus. Dilatation of the os was effected by means of laminaria tents, and the new-growth was removed by the curette. Four days later the patient experienced some uneasy sensations about the throat, tetanus set in, and death resulted within one week after the insertion of the tents.

PRURITUS ANI often proves a most annoying and obstinate symptom, persistently refusing to yield to our therapeutic endeavors. It is therefore quite comforting to be assured that we have in two well-known drugs, two equally efficient specifics. Thus Dr. Steele, of Denver (*Lancet and Clinic*), has found quinia sulphate, rubbed up with only sufficient lard to hold it together, a never-failing specific in this affection. He uses it in both pruritus ani and vulvæ. The nearer you get to the full strength of the quinine the more efficacious it will prove. And some other physician is similarly confident about the local application of Peru balsam. Hence there can now be no more troublesome itching about the anal aperture, and medicine has achieved a new triumph.

THE CARDIAC RHYTHM.—M. Dastres has forwarded a note to the Paris Académie des Sciences, describing his researches undertaken with the object of finding an explanation of the laws which determine the beat of the heart and its periodic variation. M. Marey has shown that cardiac excitability, which disappears during systole, reappears during diastole. The causes of these variations are: 1, pressure of the blood on the walls of the heart; 2, the action of the intracardiac nerves; 3, the action of the extracardiac nerves. M. Dastres concludes, from his observations, that the period of repose observed after every systole and diastole is independent of muscular action, and is determined by the action of the intracardiac nerve apparatus, which regulates the beat of the heart.

SOME OBSERVATIONS ON ALBUMINURIA.—From a study of numerous cases of the various forms of Bright's disease, seen in private practice, Dr. A. V. Meigs concludes: 1. That in no ordinary, uncomplicated case of Bright's disease should a prognosis of speedy death, or even of incurable disease be given, for he has observed cases in which the disease was chronic, lasting more than two years, and which ended in complete recovery, and others in which the person affected has lived nearly nine years. 2. That dyspnœa, usually taking the form of renal asthma, is much more common than is usually supposed, and, when properly appreciated, is a valuable diagnostic sign of the disease; also that severe coryza is a complication or accompaniment, and has a diagnostic value. 3. That Bright's disease, as a cause of death, is on the increase. 4. That it is a very common cause of the death of old people,

probably being the direct cause in many deaths reported as of old age. 5. That the passage of gravel, even when microscopic in size, but particularly if large enough to cause nephritic colic, is a prolific cause of the disease. 6. That the occurrence of tube-casts in the urine, without, or in advance of, the presence of albumen, is very common, and *vice versâ*, persons may die of Bright's disease, and the most careful examination fail to show any tube-casts, although there may be albumen constantly present in the urine. 7. That the abuse of alcohol is certainly a cause of kidney disease is proved by a case in which it has again and again caused hemorrhage from the kidney, with the temporary presence of albumen and tube-casts in the urine, disappearing again with the cessation of its consumption.—*Boston Medical and Surgical Journal*, November 2, 1882.

A Case of Proctitis caused by Two Hundred and Thirty-five Prune-stones is related by Professor Fuerbringer in the *Deutsche Med. Wochenschr.*, No. 10, 1882. A woman was admitted into the hospital in June, suffering with alleged "syphilis." This diagnosis had been made on account of a monstrous ring of inflamed varix nodules studded with flat ulcerations, situated in the anus. Involuntary thin evacuations, slow dyspeptic symptoms, and general marasmus; bedsores were also present. Finger introduced struck upon hard, sharp-edged body. Ninety-eight prune-stones were chiseled out by the finger, and the next day 137. Last October, suffering with hunger, she begged for bread, but in vain, and happened to see a large quantity of prunes; swallowed the fruit, with the stones. Eight weeks later 235 stones were removed from the rectum. Woman was well in six weeks.

The Therapeutic Use of Soft-Soap.—From a large experience with the use of soft-soap, Dr. Beetz (*Ærztliches Intelligenz Blatt*, 1882) concludes that this agent is of decided value in many cases of subcutaneous suppuration, glandular inflammation, and similar affections. A whitlow, if not already too far advanced, yields very promptly to the influence of warm applications of spiritus saponis kalinus. This preparation is a solution of two ounces of green soap in an ounce of alcohol, to which, after filtration, are added two drachms of spirit of lavender. An elegant preparation is obtained by dissolving the soap in eau-de-Cologne. But one of the most satisfactory affections to treat is bubo. And since Beetz has introduced this treatment, he has never found it necessary to treat buboes otherwise.

For the last nine years his treatment in certain other affections has been as follows: For chronic glandular indurations or abscesses in places in which it is difficult to apply dressings, he uses inunction in the evening with green soap, which is washed away the next morning and repeated during three or four days, with a subsequent interval of a day or more, according to the sensitiveness of the skin. For acute glandular inflammation, whitlows, and abscesses in easily accessible positions, linen rags are steeped in spirit of soap, applied to the part, and covered with gutta-percha paper. These dressings must be accurately applied if they are to fulfil their object. For example, in inflammation of the inguinal glands, a good result can be expected only if the surgeon himself fixes the dressing with a spica bandage and safety-pins, not leaving it to the skill of the patient himself. There will be, not a tedious suppuration but a very small abscess, with little or no trouble in walking (as there will be no infiltration). A number of other more serious diseases are enumerated in which, it is stated, a similar mode of treatment has been successful. Professor Senator also considers that soft-soap has fallen undeservedly into disuse (*Berl. Klin. Woch.*, No. 38, 1882). He has used inunctions of soft-soap in numerous cases with most distinct benefit, viz., in chronic non-scrofulous glandular swelling, in indolent syphilitic glandular swelling, and in serous exudations, including the exudations in synovial cavities. He cannot come to a definite conclusion as to the *rationale* of its action, whether it is the massage employed, or the irritation produced, or the alkali absorbed. But the fact of the increased absorption under this treatment he considers undoubted.

Action of Salicylic Acid upon the Skin.—Dr. Unna (*Monatshefte für pr. Dermatologie*, i., 4) recounts his experience with this drug. It is a sure remedy for the removal of the normal or pathological epidermis without pain in a whole, non-desquamated membrane. It would be interesting to determine whether such an action is caused through the medium of the acid upon the epidermis itself. The displacement always takes place in the epidermis, and is deeper the stronger the concentration of the acid and the denser the epidermis. The author has never seen a wet surface after the removal, but one covered with so small an epidermis that its shiny surface seemed deep red, and proved very painful to the touch. In all kinds of callosity, with or without papillar hypertrophy, in syphilitic and non-syphilitic psoriasis of the volar surfaces of the hands and feet, in aggregations of squamæ of every source, salicylic acid is the most pleasant and surest keratolytical remedy, as it is inodorous, painless, and colorless, and does not irritate the surrounding tissues. The total removal of the epidermis can only take place with the contemporaneous use of other substances which soften the epidermic cells. The collodium of salicylic acid is an efficient remedy. The application of a ten per cent. ointment with a gutta-percha covering acts well also. But evidently the simple application of gutta-percha-tissue covered with salicylic acid ointment of five to twenty grammes, according to the thickness of the horny layer, is the most efficacious. The bandage lies undisturbed for four to eight days, when it can be taken off like a glove. Salicylic acid ointment is therefore the best corn-plaster.

Aspergillus in the Ear.—Dr. Charles H. Burnett reports a case of the rare form of the parasite, the aspergillus glaucus, in the *Medical News* of November 4th. The patient was a lady, aged thirty, living in the best of hygienic surroundings, who had felt for a long time an itching in the ear, to relieve which she had repeatedly and imprudently scratched her auditory canals with hair-pins, etc., and irritated the skin of the ear. The itching was followed by lancinating pains at long intervals, some watery discharge, and a muffled sense of hearing. The walls of the meatus of each ear became swollen and the ears tender in front of the tragus. On the left side, the first attacked, the process of growth in the fungus and the inflammation had been arrested apparently by the patient's forcing, in her manipulation of the ear, some cerumin inward upon the fungus, showing what Dr. Burnett has already called attention to, that aspergillus will not flourish in or upon healthy cerumen. Underneath the ear-wax, however, the perfect aspergillus was found preserved, but arrested in growth. In the right ear the fungus

was in active growth upon the membrana tympani, its favorite habitat, and the inner end of the auditory canal. These parts were deeply injected, sensitive to the gentlest touch, even with cotton on a probe, excoriated, and exuding serum. The sides of the meatus, too, were swollen, and the ear in front of the tragus sensitive. Dr. Burnett's treatment in such cases consists in first syringing the ears gently with warm water, in order to remove as much as possible of the mycelial false membrane, which may come away as a glove-finger coat of the fundus of the auditory canal and membrana tympani. Then into the ear there is blown pulverized boracic acid. Should it subsequently be found that some spots of the false membrane still remains, there may be blown into the ear a powder consisting of salicylate of chinoline, ʒ i., boracic acid, ʒ i. Under this treatment, on the third day, the left ear had become normal in every way, and on the sixth day the right ear was well. Dr. Burnett thinks it is well to allow some of the boracic acid to remain over both drum-membranes and the inner end of the auditory canal about the membrana tympani, in order to sterilize the region and render it unfit for the growth of the fungus. Alcohol is now no longer employed by this author as a parasiticide in these cases.

Chinolinum Tartrate.—Dr. Carl Rosner (*Prakt. Arzt*) writes: Chinolinum, a constituent of coal-tar as well as the Dippel's tar, was introduced into medicine as a substitute for quinine a short time ago. The tartrate is the only preparation adapted for internal use. It is found in silk-like shining crystals. If at the start it must be conceded that quinine will not be displaced by the new preparation, it deserves, nevertheless, some attention and further trial on account of its antiseptic and antisedative effects, and the more so as the price of this article is five times less than quinine. The tartrate of chinolinum is used in single doses of from five to fifteen grains. The daily maximum dose for an adult at present is placed at ʒ ss. Children of five to ten years receive the third part of the adult dose. Rosner has ceased to use this remedy in practice of children, however, on account of its nauseous and disagreeable taste. On the other hand, in adults he recommends emphatically chinolinum in febrile diseases, and has obtained excellent results in the treament of pulmonary phthisis. The formula which he employs is as follows:

℞. Chinolin. tartrat ..... gr. 45
Ext. Cinchon. ..... gr. 135
M. Ft. pil. No. xx.

D. S.—Two pills every two or three hours (thus 0.3 (gr. v.) per dose). Under some circumstances, as in phthisis, an addition of opium (0.005 per pill) can be recommended. A good way of administering the pill is in a boiled prune.

Lycoperdon as a Hæmostatic.—Dr. E. Thompson, of the Tyrone Infirmary, writes to the following effect: Some months since, I directed attention to the use of the puffball as a hæmostatic and surgical dressing. My attention was first directed to this substance in the case of a poor woman who had suffered for a long period from an open cancer of the right breast. I visited this patient, and ascertained that she had tried almost every form of surgical dressing without being in the least relieved either of her sufferings or the constant hemorrhages which weakened her. In despair she sought the aid of a country quack, who suggested the use of the puffball, or *lycoperdon giganteum*, which grows close to the roots of trees in some of our woods. From the day the patient commenced the use of this substance her sufferings were greatly mitigated, and she improved in health and strength. The frequent bleeding ceased, and the foul odor from the sore was greatly diminished; and the poor woman lived in comparative comfort for seventeen years after the first appearance of the cancerous ulceration. The puffball is a most soft and comfortable surgical dressing, and the powder it contains seems to possess antiseptic and anodyne properties. When mature and fit for use it is almost as large as a man's head; it is enclosed in a thin capsule which must be removed, it can then be torn in pieces and used either as a styptic or for applying any required surgical dressing. It is, however, its hæmostatic properties that seem to me to be so especially valuable; it has the power of stopping instantly even the most violent external hemorrhages upon which iron, matico, turpentine, etc., have been tried in vain. A leading surgeon in Belfast told me that when removing a large tumor from the neighborhood of the orbit, he encountered a violent hemorrhage from large arteries in the bone, which even plugging with pieces of wool failed to control; yet a small piece of the puffball at once restrained all bleeding. I have directed attention to this useful substance, whose value my own experience has assured me of, in the hope that some of our leading surgeons will try it, and ascertain for themselves its utility.—*London Practitioner*, October, 1882.

Suppositories for Hæmorrhoids.—The following formula is given in the *Louisv. Med. News:* Iodoform, ʒ j.; balsam of Peru, ʒ ij.; cacao butter, white wax, ää ʒ jss.; calcined magnesia, ʒ j. Incorporate the mass thoroughly and divide into twelve suppositories. Insert one after each evacuation of the bowels, and oftener if needed.

American Trichinosis.—According to a recent report to the Sanitary Committee of Massachusetts, it appears that of 2,701 pigs examined during five months, no less than 154, or nearly six per cent., contained trichinæ. The animals came from different and distant regions, but the majority were from the Western States. The same report affirms that rats are affected with trichinosis at Boston to a much larger extent than in Germany. Of 51 rats caught in a Boston slaughter house, 30 presented trichinæ. On the other hand, 28 fowls fed in the establishment were found to be healthy. Forty rats taken in another large slaughter house all contained trichinæ, but of 60 found in different stables, only 6 were thus affected. In France little consideration has, until lately, been given to the danger of trichinæ in imported pork. At Lyons, however, inspection has been commenced, and has quickly borne fruit. An enormous consignment of lard, amounting, it is said, to 120 tons, was lately received at Lyons from New York. Of 50 specimens examined immediately after arrival 3 were found to be infested with trichinæ. At Barcelona six cases of death from trichinosis have occurred in three months.

Will Quinine Produce Abortion?—Dr. Otis Manson (*Maryland Medical Journal*) says that from an experience of forty years in the treatment of malarial fevers, he is confident that quinine not only will not produce abortion, but that when properly administered it is a preventive of this unfortunate occurrence. He says that at the commencement of his career, when he was timid in the administration

of quinine, abortion was no uncommon occurrence in pregnant women attacked with the various types of periodical fever, and to whom no quinine had been given. Abortion is, according to this author, a frequent occurrence in fevers of all descriptions, and the female may consider herself fortunate in passing through the commotion of any fever without a premature expulsion of the fœtus. Since he commenced to employ quinine in liberal, yet reasonable doses, in paroxysmal fevers, he has never observed abortion in patients affected with them. The author argues that it is reasonable to suppose that an agent which, when properly administered, will prevent the convulsive rigors of the cold stage, and the high febrile excitement of the exacerbation which follows, would be the best means of preventing abortion in those subject to such violent disturbing influences.

Sudden Death and Coma in Diabetes.—Frerichs distinguishes three forms of sudden death, or coma in diabetes: 1. Sudden death from syncope, collapse, paralysis of the heart after exertion, etc. 2. Coma, ushered in by gastric or other local affections, and accompanied by headache, delirium, anxiety, and dyspnœa. 3. Coma without dyspnœa, commencing with headache, vertigo, a feeling of intoxication, and drowsiness. As regards the alleged causes of coma and sudden death in diabetes, Frerichs states: (1) Œdema, or anæmia of the brain, must be rejected on the evidence furnished by numberless autopsies. So also must (2) the existence of hyperglycæmia, an inspissation of the blood, whereby the corpuscles are changed and rendered unfit for the respiratory function. (3) Uræmia can be proved to exist neither through examination of the urine nor by any changes found post-mortem in the kidneys. (4) Fatty emboli have been discovered in the capillaries of the brain or lungs in only a very insignificant number of autopsies. (5) Acetonæmia. Large quantities of acetone have been found in the urine of diabetic and other patients in whom no nervous disturbances were present. Further, large doses of acetone, administered to men and animals, have failed to produce any dyspnœa or brain symptoms. The theory of necrotic processes in the kidneys, advanced by Ebstein, the author also rejects, as other observers have failed to substantiate his discoveries. The so-called hyaline changes in the urinary tubules, however, are constant. This hyaline substance, Frerichs asserts, is produced by glycogenic degeneration—is, in fact, glycogen. Analogous changes have been found in the liver, the heart, inflamed lung tissue, and other organs.—*Wiener Med. Wochenschr.*, No. 35, 1882.

Scurvy in an Infant.—Dr. Verger related to the Association Française pour l'Avancement des Sciences a rare case of scurvy occurring in a nursing child. The patient, seven months of age, presented a perfect clinical picture of scorbutus in the second stage. The infant was living under the most wretched hygienic conditions. It died after renal and intestinal hemorrhages.—*Le Progrès Médical*, No. 37, 1882.

Linear Incision in Cancer of the Rectum.—At a recent meeting of the Société de Chirurgie de Paris, Dr. Trélat reported a case of extensive rectal cancer in a man fifty-six years of age, in which marked relief followed linear incision of the rectum. The patient was too weak to permit of an operation for artificial anus, so a longitudinal incision was made with the thermo-cautery through the posterior wall of the rectum. The man's condition improved at once, and his life was prolonged for eight months after the operation. In the discussion which followed this communication, Dr. Verneuil stated that he had practised this operation many times with benefit. Le Dentu related five cases in which he had performed linear incision of the rectum in cancer with immediate relief of the pain and tenesmus. Després was opposed to the practice and preferred gradual dilatation.—*Bull. et Mém. de la Soc. de Chirurgie de Paris*, vol. viii., 1882.

Permanent Tracheal Tampon.—Dr. J. Michael relates a procedure adopted by him for a permanent tamponade of the trachea. A piece of wet sponge is cut into a cylinder of proper size with a hole in the centre through which the canula is passed. The sponge is then tightly wound around with string and dried. A sheath of gold-beater's skin is now drawn over the sponge and tied securely to the canula below. After the insertion of the tube water is poured on to the sponge and the sheath is tied firmly above it. The sponge swells and effectually closes the trachea. When the tracheal wound is large enough, Dr. Michael simply wraps a quantity of rubber tissue around the canula and inserts it into the trachea. If local applications are to be made to the larynx, and it is desirable to allow the secretions to escape below, a double canula is used. In the outer tube a fenestrum is cut, which opens and closes with a slide, and the inner tube is provided with a flange that fits closely to the inner surface of the outer canula just below the fenestrum.—*Wiener Med. Wochenschr.*, No. 37, 1882.

Interstitial Injections in the Treatment of Epithelioma.—Dr. Duplony says that the uncertain results obtained in the treatment of cancer by interstitial injections are due to a lack of thoroughness on the part of the operator in not extending the area of injections far enough into the sound tissues. It is essential to the success of the treatment by this method to act not only upon the diseased tissue but also upon what the author calls the generative zone. Dr. Duplony employs concentrated acetic acid which he injects not only into the tumor itself, but into the area beneath and surrounding it in such a way as to encircle the neoplasm by a series of injections. After a variable number of injections, according to the size of the tumor, the new growth is exfoliated, leaving a granulating surface, which is tolerably certain to be free from all cancer elements. The injections are extremely painful, but the pain is of short duration Dr. Duplony has tried this method in two cases with most encouraging results.—*Le Progrès Médical*, No. 37, 1882.

Pilocarpine in the Treatment of Polyuria.—Dr. Ducroux states that in certain varieties of polyuria the nitrate of pilocarpine, in doses of one-fifth of a grain hypodermically, has been found useful. In two cases of polyuria, one idiopathic and the other depending upon interstitial nephritis, a complete cure was effected. In the latter case a marked amblyopia also disappeared during treatment. In two other cases some amelioration of the symptoms was obtained. In three cases, one depending upon lead poisoning, the treatment was unsuccessful. The number of observations has not been large enough as yet to determine the particular cases that are amenable to this method of treatment.—*Le Progrès Médical*, No. 37, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, December 23, 1882.

HOSPITAL SATURDAY AND SUNDAY.

THE time will soon arrive when the collections for hospitals will be made in this and other cities. It is fair to say that the receipts will probably be greater than on any previous year. One reason for this is that the public is becoming more and more impressed with the good work which the institutions are doing. The old prejudices against treatment in hospital are fast dying out. The poor man is beginning to look to the hospital as his best refuge in times of greatest need. He has been impressed with the fact that he can obtain in the ward better care than in his own home. He leaves the institution, not only with a thankful heart for health restored, but is led to wonder how could he have done without it. Every one accustomed to treat hospital patients has these experiences repeated to him almost daily. They rarely come to light, however, except on the occasion of anniversaries, when the pockets of the rich are directly appealed to. And even then to what little purpose! With few exceptions the really rich men contribute comparatively little toward supporting our hospitals. Their charity is more apt to take the direction of church building, of evangelizing the heathen, or of increasing the salary of the minister. All these objects are excellent in their way, but the sick poor at our very gates have also a pressing claim upon their bounty and protection. The medical profession can clear its skirts of responsibilities toward this needy class by tendering its services gratuitously. If other philanthropists would give an equivalent, there would be no need for extra appeals.

It is a strange fact, however, that where the most is expected the least is realized. It may be learned with much surprise that, as a rule, the churches contribute a very small proportion toward the maintenance of the hospitals. Even is this the case with many of the institutions which are supposed to be under special denominational influences. The consequence is that many of our most useful hospitals, institutions which are ready to receive any and every needy patient simply because they are sick and poor, are running in debt. Such charity should not be trammelled by increasing pecuniary liabilities. The public inside and outside of the church owes a debt to these hospitals which cannot even be paid by the most bountiful donations. But it is to be hoped that the establishment of the Hospital Saturday and Sunday will be the beginning of the end.

This year a new plan is to be tried by which the different trade societies shall be allowed to contribute to the fund. Each dollar given will represent one day's treatment in hospital, for one patient. It will be, in fact, a provident system applied to our larger hospitals, and cannot fail to be satisfactory and useful to all concerned. We hear with much satisfaction that many of the trade societies have organized auxiliary hospital societies for this purpose, and that there is a prospect that large sums may be realized from them. The hospitals have a great claim upon members of these clubs for charitable work already rendered, and it is to be hoped that due advantage will be taken by them of the opportunity for reciprocating.

The system of distributing the funds among the hospitals, in accordance with the actual proportion of charitable work done, is as it should be. The hospital having the most claims in this direction, certainly has the best record of good work done.

The medical profession can hardly be called upon as a class for pecuniary aid; but there are many ways in which it may use its influence with the public in furthering the ends of the hospital committee. But there is really no necessity for urging this upon a profession always foremost in its deeds of practical charity.

HOSPITAL HOMES FOR THE FAMILY PHYSICIAN.

A NEW hospital in Brooklyn, N. Y., with a somewhat novel plan of organization, was thrown open to the public on Saturday last. The institution is in charge of the Catholic Sisters of Charity, and is under the medical directorship of John Byrne, M.D., F.R.C.S., the well-known gynecologist, who is also the father of the institution. It is of Philadelphia brick, is four stories high, and when completed will cover the entire block between Rochester and Buffalo Avenues. Only one wing, however, has been erected, and it is that which has been opened.

The charity is designed for the treatment of female diseases more particularly, and is in reality to be a collection of specialty hospitals under one roof. The new departure in the organization consists of a division into eleven separate departments, each of which is to be in charge of a physician or surgeon "in chief," who is assisted by two associate or visiting physicians, so that each depart-

ment is under the care of three competent specialists besides a consulting staff.

A number of rooms have also been fitted up in the hospital for the convenience of any reputable physician who may desire to have a patient in the hospital and within reach of special treatment, yet under his own care.

The latter feature is one concerning which much may be said. While it is quite true that all good physicians cannot hold hospital appointments, there is no reason why some well-equipped and well-governed institution should not offer their facilities for the treatment of such special cases, as cannot be cared for in private houses or hotels. In fact, this is a necessity that is becoming more and more apparent in our larger cities, and any experiment in a proper direction deserves encouragement. In the larger hospitals such an arrangement could hardly be made without seriously conflicting with their plans of organization, and methods of government. But while impracticable in such institutions it is not difficult to see how hospital homes having the object indicated in view, should not be met with great favor. The result of the experiment in Brooklyn will doubtless be watched with much interest by a large class of physicians who desire extra accommodations and skilled nursing for special and private cases. It is, in fact, adapting the College Hospital plan to the wants of the family physician.

SIR THOMAS WATSON.

THE announcement of the death of Sir Thomas Watson, of London, although not unexpected, brings with it more than ordinary regret. Now that the end has come, that the last chapter in his long and useful life has been finished, we almost irresistibly turn back to study anew the well-rounded record of his influences for good in his day and generation. Few men had greater opportunities in this direction, and few used them to better advantage. With rare intellectual ability and a disposition for patient and honest work, no one during the last century exercised greater influence upon the progress of our art or did more to formulate the fundamental principles of our science than did he. His grasp was large and his view extensive. Upon a higher elevation than that occupied by his fellow workers he surveyed the entire field, and was enabled by a calm and consistent philosophy to bring in accurate perspective their various opinions and prejudices. The results of this work are shown in his master-piece. There is no progressive physician in this country or Great Britain who has been practising for the last quarter of a century who has not studied "Watson's Practice of Physic" with interest and satisfaction; not one who has not been impressed with the soundness of views therein expressed, or who has not been influenced by the opinions therein offered. Sir Thomas was the highest type of a general practitioner, who studied the body as a whole, who appreciated the dependencies of its parts, and who treated it as a whole. This is so apparent throughout his work that every thorough physician especially values it on that account. Advances have been made since the last edition, but the principles on which the general treatment of disease is founded will always be the same. Sir Thomas on these points must always be heard. His studies were from nature —acute, accurate, and achromatic. His descriptions of disease will never be excelled. His grace of style, his genius for description, made him not only a truthful but an enchanting writer. He infused into the atmosphere of medicine a delightful romance, and with his enthusiasm seemed to warm into new life old and almost forgotten principles. Notwithstanding the number of years that his work has been in the hands of the profession, the medical student of to-day still reads it with unabated interest. Its intrinsic value will never be less. It will retain its place among the standard works of medicine as a classic, and will be a most fitting monument for its great and gifted author.

SHALL THE NATIONAL BOARD OF HEALTH BE ENDORSED BY MEDICAL SOCIETIES?

A LARGE part of the powers of the National Board of Health will, under the law creating them, end next Spring unless Congress specially legislates to the contrary. At its last session the National Legislature showed little friendliness to the Board, and during the past summer the placing of the epidemic funds in other hands has been regarded as indicating further lack of confidence in its methods. The Board went to the American Public Health Association at its last annual meeting and obtained the comfort of a strong endorsement by that body. We infer from certain resolutions brought before the New York County Medical Society that the Board is now seeking support and approbation from the medical profession at large.

The claims made for the further continuation of the National Board of Health are the following: It has established a small-pox inspection service in the West, which has rendered material service; it has organized a steamboat inspection service on the Mississippi, and a quarantine at its mouth, whose efficacy and usefulness, we are told, are beyond question; it has done some very good scientific work in investigating the nature of diphtheria, malaria, soil pollution, etc., and it has furnished the country weekly tables of vital statistics. All this is very good and doubtless has had local appreciation at least. To say, as does *The Sanitary Engineer*, that the "Northwest demands," the "Mississippi Valley insists upon," and the "South Atlantic coast

is unanimous in favor of" the special services in those sections is, however, putting it somewhat too strongly.

At its inception we strongly favored a national health organization, and we venture to take some credit for help given to secure it. For some reason, however, the organization has failed to gain the general confidence or support of the public. This is not due alone to the much-talked of lack of political influence, or to the prejudices of the Assistant Secretary of the Treasury and the ill-temper of Washington correspondents. The causes have been partly also in the organization itself; there has been a suspicion that the Board was managed too much in the interests of a clique who wished to advance themselves quite as much as to protect the public health. There has been a feeling also that the Board has not done all that might be expected with the liberal sums of money given it. At any rate the public at large speaks lightly of it and refuses to acknowledge the imperative necessity of its existence. This appears to us to be the actual fact in the case without reference to the justice of the public's position. With regard to the medical profession, it is a mistake to say in a large way that the Board receives its unanimous endorsement. The medical profession as a whole know little and, unfortunately, care not much about a national health organization. This is perhaps natural, for the physician is not a sanitarian, and, absorbed in daily practice, he cannot become deeply interested in problems of inland quarantine or of single and double sewage.

The medical profession should not be said, therefore, to be unanimously approving that in which they are taking comparatively little interest.

A national health board is an organization for protecting the health of the people; and to the people its work is directed. It is fair to ask, therefore, why this organization should go to the doctors for endorsement of its labors in behalf of the general public. Are the doctors the only persons who see it? We confess to feeling, with our esteemed contemporary, the *Boston Medical and Surgical Journal*, that this action of the Board is undignified and hurtful to it.

We believe in the need of a national health board, but there is no use in trying to force it upon an unwilling public. The present Board has done fairly well, but for certain reasons it has failed to make a favorable impression.

We believe that for future success the Board must be thoroughly and radically reorganized, so that there will be no petty Washington quarrels over its work. Medical societies ought to be careful in endorsing it as matters now stand in our great capital, for the situation is a complicated one. The National Board wishes to use the Marine Hospital Service; that service wishes to swallow up the Board; the Naval Medical Department wishes to absorb the Marine Hospital Service, and perhaps the Board also in course of time. In such a state of affairs, with a short session and a busy Congress, is it wise for county medical societies to weaken their influence by resolving that an organization subject to such "abhorrent" forces is perfectly satisfactory and needs only another appropriation?

CLEMENS' ALLEGED DIABETES CURES.

Some six years ago, a German physician, named Clemens, announced his discovery of a new chemical compound, possessing great curative powers in several chronic diseases. This alleged new compound was designated Brom.-Arsen. Solution. It was claimed to be especially serviceable in various skin affections, in chronic malaria, and in long-standing syphilis. So positive was Clemens in his assertions, and so astonishing were the therapeutic results said to be obtainable by the liquid, that for a time his writings attracted considerable attention.

It was soon demonstrated, however, that this alleged chemical compound of arsenious acid and bromine, was merely a mixture representing a solution of arsenate of potash. Consequently, any curative results obtained by its use were alone attributable to the arsenic, and belonged in no way to the bromine. The latter, indeed, always evaporated from the mixture after a few days' standing. Clemens' claims were accordingly speedily perceived to have been based on an entirely erroneous assumption, and his method was soon forgotten.

With the pertinacity belonging to all false reasoners, he has, however, still clung to his former belief in the potency of brom.-arsen. And more than this, somewhat of the stir originally created by his assertions has been now revived by more recent publications contained in the *Allgemeine Med. Zeitung*.

This time, Clemens has directed the power of his brom.-arsen. mixture against true diabetes. And again he boldly claims unparalleled curative action for his liquid. Many cases, he says, were permanently cured, others were greatly benefited, and even in the last stages of apparently hopeless cases life was often prolonged.

As adjuvants to treatment, Clemens uses daily inhalations of oxygen (ozone?) of electrical origin. Electro-static shocks and currents are also passed directly through the liver. Now, although Clemens is by no means a full-fledged charlatan, nevertheless his sweeping assertions savor greatly of quackery. For, as already stated, any benefit to be derived from the use of his medicine, must be equally ob-

tainable by employing Fowler's solution, or similar preparations of arsenic.

In view of such well-known facts, it is painfully surprising to find an elaborate special article on this subject in a recent issue of the *Philadelphia Medical Times*. The writer therein congratulates the readers of the journal, because they are first in America to be informed of this important innovation. And he adds that the new method deserves to be seriously considered and carefully imitated in our country. Had the writer only taken the pains to consult a leading German treatise on materia medica, we doubt whether he would have re-echoed with such confidence the assurances of a well-known pretender.

We have no doubt that certain cases of diabetes can be improved by the exhibition of arsenic. And that electricity, judiciously employed, may greatly improve a constitution vitiated by chronic disease is readily apparent. But between these well-known details and the absurdly pretentious claims of Clemens' alleged discovery there is a wide and irreconcilable difference. And therefore, in this instance, as in all similar ones of attempted fraud, the light of day means but the consignment to a well-merited oblivion of false claims.

EXPERIMENTAL PATHOLOGY IN NEW YORK.

NEW YORK occasionally makes pretensions to medical eminence, and these pretensions we have been accused of unduly praising. It has been our purpose, however, to censure New York's deficiencies as well as to call attention to its merits. We are at times strikingly reminded of the presence of the former, and we would especially refer now to the lack here of opportunities for study and research in experimental pathology and physiology. There are plenty of eminent pathologists in the city—men of fine accomplishments, who have studied long and faithfully. There are plenty of persons who take a special interest in pathological and physiological science, but their work is, for the most part, narrow and petty. We would ask if it is enough to show remarkable specimens at the societies, to diagnose tumors for large pecuniary considerations, and to teach young medical students the rudiments of microscopical science. These are useful and necessary things, but they represent pathology at a standstill.

Our colleges do even less. They have laboratories, but supply no opportunities, worthy the name, for original research, and offer no stimulus to experimental investigation. The instruction of students at a dollar and a half a lesson, is the chief aim of most of our "laboratories;" and it has to be so because of lack of corporate support.

When we compare things in their present state with what they were, it must be admitted that our societies have done some work. But they seem to be quite contented with their present methods and without ambition to rise above discursive gossip over inconsequential specimens.

Now the most important problems of medical science relate to the real nature of disease, and they are problems which we look to our pathologists to solve. Can we not get something better from our prosperous colleges, our numerous societies, and our distinguished specialists?

Our neighbor city, Philadelphia, sets us an example that should be followed here. In the past few years a large amount of original work has been done in the pathological laboratories of that city. It is work of a kind which New York has done, but is now very much neglecting. There should be some institution or body in our city which is willing to establish a laboratory for pathological study and experimentation, as well as for routine examinations and instruction.

PROFESSOR JOSEPH D. BRYANT, SURGEON-GENERAL OF THE STATE OF NEW YORK.

THE appointment by Governor-elect Cleveland of Professor Joseph D. Bryant, of this city, as Surgeon-General of the State of New York, is, from a medical point of view, one of the best that could have been made. Dr. Bryant will represent the profession of the city and State in a thoroughly satisfactory manner. He brings to his office a well-earned reputation for good work in college and hospital as well as a varied and extensive experience in military affairs. We, in common with his many friends, wish him every success.

Reviews and Notices of Books.

MENTAL PATHOLOGY AND THERAPEUTICS. By W. GRIESINGER, M.D. Translated from the German (Second Edition), by C. LOCKHART ROBERTSON, M.D., and JAMES RUTHERFORD, M.D. New York: William Wood & Co. 1882. Library of Standard Medical Authors.

GRIESINGER'S work has been before the English-speaking public for fifteen years, and its good qualities hardly need amplification now. Griesinger is one of the representatives and leaders of modern scientific psychiatry, and his work needs to be studied by every one who intends to make himself acquainted with the subject of insanity. The present volume is somewhat behind in the matter of anatomy and pathology. But, on the whole, it is surprising how little there is in the book which needs to be altered. We believe that the general practitioner should read this book, even if he does not treat insanity. It will be an education to him whose good effects he will soon appreciate.

A Treatise on the Physiological and Therapeutic Action of Sulphate of Quinia. By Otis Frederick Manson, M.D. Philadelphia: J. B. Lippincott & Co. 1882.

Dr. Manson's work is a valuable and laborious compilation of the investigations so far made into the action of quinine. After giving a historical review the author describes the action of quinine: 1, upon animals; 2, upon man in health; 3, upon man in disease.

The therapeutic uses of the drug are then discussed. We cannot agree entirely with Dr. Manson's conclusions as to the physiological action of quinine. He states quite positively that there is nervous stimulation immediately after the ingestion of quinine when given in small and repeated doses; and this he ascribes to its local action on the stomach—a monstrous supposition. Dr. Manson believes that quinine is essentially calming and sedative in its action. In our opinion he lays too much stress upon this and not enough upon its stimulant effects, which, clinically, are very often observed.

On Slight Ailments: Their Nature and Treatment. By Lionel S. Beale, M.B., F.R.S., etc. Second Edition, Enlarged and Illustrated. Philadelphia: P. Blakiston, Son & Co. 1882.

The importance of justly appreciating slight ailments and being able to treat them intelligently can hardly be overestimated. In many cases the key to success in practice may be found in a proper attention to apparently insignificant matters. For the young practitioner, just starting on his career, we know of no work that will better pay perusal than the little volume before us. The present second edition has been improved by a careful revision, by the addition of new matter, and by the introduction of several illustrations. In its present shape Beale's work may be safely commended to the careful study of all young practitioners. And we will add that even many an older man may derive profit from an examination of its suggestive pages.

Die Pflege und Ernährung des Kindes. Von Dr. A. Jacobi, Professor der Kinderheilkunde am College of Physicians and Surgeons zu New York. Separat-Abdruck aus Gerhardt's Handbuch der Kinderkrankheiten. 2te Auflage. Tübingen: H. Laupp. 1882. (The Care and Nourishment of the Child. By Dr. A. Jacobi.)

In this excellent monograph, which forms a portion of Gerhardt's comprehensive "Manual of Children's Diseases," Dr. Jacobi treats exhaustively of the care of the infant during its earliest period of life, adding a few details concerning the management of the child in later years. Explicit directions are given to be followed in the selection of a wet-nurse, and the influence of diet upon the mother's milk is treated of at length. A large portion of the work is devoted to the consideration of the difficult question of artificial feeding, and contains many very practical suggestions, most of which have appeared in the various publications in English by the same author. Six pages at the end of the book are taken up with a condensed abstract of the entire subject, and as references are made by pages to the body of the work it answers the purpose of an index as well. Three short chapters are added upon the care of the teeth, the eyes, and the mind. The book is worthy of careful perusal, and we hope that it may soon be presented in an English dress for the benefit of the author's confrères in this country.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 22, 1882.

Dr. G. L. Peabody, Vice-President, in the Chair.

DESTRUCTIVE INTERSTITIAL METRITIS.

Dr. Geo. F. Shrady presented a specimen of destructive interstitial metritis in behalf of a candidate. It was referred to the Committee on Microscopy for report.

Dr. J. Lewis Smith presented in behalf of candidates: (1) An acephalous monster; (2) Specimens illustrating the lesions of cerebro-spinal meningitis.

REPORT OF THE COMMITTEE ON MICROSCOPY.

Dr. W. H. Porter, from the Committee on Microscopy, reported progress on the sections of intra-uterine pedunculated tumor presented by Dr. Ferguson. He further reported that the tumor presented by Dr. Briddon at the stated meeting, November 14th, was a *lipoma*.

Dr. Sell presented two specimens of

TÆNIA SOLIUM.

One was obtained from a female patient, thirty years of age, single, who had been aware of the presence of the worm for three years. The other was obtained from a female patient, thirty years of age, married, who had been aware of the presence of the worm for three months.

The plan of treatment was somewhat different from that which he had reported at a former meeting, and was as follows: Ten grains of calomel were given on a Friday evening. On Saturday the patients took nothing into the stomach except stewed pumpkin and slippery-elm tea. On Sunday they took the following mixture, divided into four equal portions, and administered at intervals of fifteen minutes:

℞. Pumpkin seeds ..... ℥ j.
Ethereal extract of male fern.... ℥ j.
Kameelæ ..... ℥ ij. M.

If the patient does not have a free evacuation from the bowels within two hours after taking the last dose, or as soon as gurgling, with or without colicky pain, appears, administer an ounce of Rochelle salts, or Epsom salts, or, in cold weather, castor oil. When purgation begins, have the patient sit over a pail partly filled with warm water.

To prepare the medicine, remove the outer envelope of one ounce of fresh pumpkin seeds, and then beat them into a paste with one hundred grains of sugar finely powdered. To this paste add half a fluid-ounce or more of water, and when a homogeneous mixture has been obtained add the other ingredients gradually, and to the whole add water sufficient to make four ounces.

VAGINAL CYST.

Dr. Tauszky presented a small tumor removed from the peri-vaginal and peri-rectal tissue of a patient, thirty-five years of age, who had been married ten years, but had been sterile. During the last six months, coitus, sitting, or walking had been attended by severe pain, and during the last three months the pain had increased so that her sleep had been seriously disturbed. Examination revealed the mass, the size of a large walnut, in the left

side of the vagina, and encroaching upon the left labium minus. It was removed with the handle of the scalpel and curved scissors through an incision made in the mucous membrane and submucous tissue. The wound healed kindly. Dr. Tauszky thought that the tumor might possibly be of the atheromatous variety, although he had not been able to find any reference to such growths in this region. The specimen was referred to the Committee on Microscopy.

FRACTURE OF THE THIRTEENTH DORSAL VERTEBRA IN A HORSE.

Dr. Liautard presented a section of the spinal column of a horse, which illustrated what sometimes occurred when an animal was thrown for the purpose of performing some operation. The legs were brought together with a strap and held, and during the operation the animal struggled, arched the spinal column, and at the same time crowded backward the large mass of intestines. Overbending the spinal column in that manner sometimes resulted in fracture of the body of one of the vertebræ, usually the last dorsal or first lumbar, and when the injury did occur the animal became suddenly quiet, the body was covered with a cold perspiration, and when the strap was removed was unable to get up. In the specimen presented the fracture had taken place much farther forward than usual—namely, in the body of the thirteenth dorsal vertebra, and on looking through the spinal canal it could be seen that the fractured portion must have pressed upon the spinal cord.

Dr. Liautard also presented a specimen illustrating

MALFORMATION OF THE JAWS OF A HORSE.

Normally the male horse had forty and the female thirty-six teeth. In each jaw there were six molar teeth upon each side. The specimen was interesting for the fact that there were *seven* teeth in each molar arch. On the left side of the head, the molars had, instead of meeting squarely, shut over each other, so that the lower ones had been bevelled off upon the outside, and the upper ones upon the inside. On the right side of the head the molars presented the normal appearance, except with reference to number. Some eight or ten years ago, the animal was under his observation, and at that time had difficulty in masticating. Subsequently symptoms of apparent glanders developed, and finally the food passed out through the nostrils. At the post-mortem there was found, besides the deformity of the jaws, disease of the palate-bone, that accounted for the fetid discharge and apparent glanders. There was also a marked change in the curve of the incisor arch, so much so, that the lower front teeth were nearly horizontal.

CYPHOTIC PELVIS—CÆSAREAN SECTION.

Dr. Garrigues presented specimens taken from the body of a woman thirty-one years of age, upon whom he had performed Cæsarean section. To close the incision in the uterus twenty-four carbolized silk sutures were introduced; one half embracing the entire uterine wall and, the other half including only the peritoneum. Union by first intention had taken place throughout two-thirds of the extent of the wound. The abdominal wound was closed with deep silver sutures and superficial silk sutures, and union by first intention occurred throughout.

The pelvis was cyphotic, the long axis of the superior strait being antero-posteriorly.

The bodies of the three lower lumbar vertebræ had almost entirely disappeared. There was marked defect in the first and second sacral vertebræ. The iliac bones sloped inward and the pubis was thrown upward and forward. The ischii approached each other to within one-third the normal distance, and the arch of the pubis was very small, The outlet of the pelvis was nearly of the shape of a leaf of clover, and when covered with the soft parts admitted two fingers only when they partially overlapped each other.

The child had been dead for many hours before labor began. The mother had cardiac and pulmonary disease, and finally was reduced *in extremo* by hemorrhage. Three operations were considered: Cæsarean section, Porro's operation, and laparo-elytrotomy. After due consultation with Dr. Mundé and others, it was decided that the Cæsarean section was the only available one under the circumstances, for prolonging the life of the mother.

EPITHELIOMA OF THE LARYNX.

Dr. Elsberg presented a tumor removed from the interior of the larynx of a man forty-four years of age, who, six years ago, came to him with catarrhal inflammation of the nares, pharynx, larynx, and trachea. At that time there was seen a small tumor, and he advised the patient to either leave it entirely alone or else have it thoroughly removed. Soon afterward the patient passed from under observation. About two months ago he returned, when it was learned that several unsuccessful efforts had been made to remove the growth, and considerable irritation had been produced. On examination it was found that the tumor had grown so as to extend from the anterior nearly to the posterior extremity of the ventricle of Morgagni, and there was slight ulceration. There was no general evidence that it was malignant. It produced no special uneasiness, and it was only because his voice was so much affected that the patient sought medical advice.

The specimen had been examined by Dr. Heitzman, who pronounced it to be epithelioma. The practical lesson to be learned from the case was that tumors in such cavities as the larynx should be left severely alone or else removed thoroughly. Dr. Elsberg, felt sure that in other cases, if not in this one, tumors which were non-malignant had become malignant through irritations to which they had been subjected by picking and incomplete removal.

Dr. Elsberg also presented a specimen of

MYXO-ANGIOMA OF THE TONGUE,

with the following history: It was removed from the base of the tongue of a woman seventy years of age, who had suffered from post-nasal catarrh for many years. When in position it was about two inches and a half in diameter, and nearly occluded the entrance to the pharynx and œsophagus. It was compressible, so that, when removed, it was only about one-third the size it was when in position. It was removed with a wire écraseur, passing one over another from the top of the growth downward until the base of the tumor was reached. Microscopical examination revealed that it was a myxo-angioma, a rare variety of tumor to be found in that region.

Dr. P. E. Donlin presented a specimen of

EXTRAUTERINE PREGNANCY,

removed from the body of a woman twenty years of age. There was no suspicion, so far as he was able to ascertain, that pregnancy existed. Suddenly she was taken with extreme pain in the back, her lips became blanched, her skin whitened generally, and the attending physician believed that there was uterine hemorrhage, although unable to obtain the facts in the case.

Dr. Janeway examined the specimen at the request of Dr. Donlin, and found that it was a case of tubal pregnancy. The most interesting feature of the specimen was the fact that the corpus luteum was in the ovary upon the side opposite to the tube where the pregnancy existed. The centre of the corpus luteum had undergone cystic degeneration. He had presented a similar specimen from a case in which the pregnancy had not advanced beyond three weeks. The fœtus was in the Fallopian tube opposite to the ovary in which the corpus luteum existed. [See Medical Record, vol. xvi., p. 162.] An explanation which had been offered in such cases was that the ovum passed across the abdominal cavity and entered the opposite Fallopian tube.

Dr. Garrigues remarked that it had been proved experimentally that the ovum might pass across in that way. An Italian physician had ligated the Fallopian tube upon one side and removed the ovary upon the other, and the animal subsequently became pregnant.

PERITONITIS IN A CHILD NINE DAYS OLD.

Dr. J. Lewis Smith presented a specimen which illustrated the fact that violent and fatal inflammations were liable to be latent in feeble, badly nourished babies. The child was nine days old, and was nursed by a wet-nurse after its arrival at the New York Foundling Asylum. Vomiting was not a prominent symptom, and the intestinal evacuations were regular. The curator did not expect to find any special lesion at the autopsy, but, to his astonishment, he found general peritonitis. The intestines were agglutinated to each other. The under surface of the liver was covered with recent lymph. The spleen was adherent to the stomach.

In the same institution a child twenty days old died with the same disease.

CHRONIC DIFFUSE NEPHRITIS—THROMBUS IN THE MIDDLE CEREBRAL ARTERY—CEREBRAL HEMORRHAGE.

Dr. Beverley Robinson presented the cerebral arteries and the kidneys removed from the body of a man, who gave the following history: He was forty-nine years of age, and entered St. Luke's Hospital October 25, 1882. He presented the ordinary symptoms of the atrophic kidney of chronic Bright's disease. On October 10th the patient was noticeably failing, especially with reference to his mental powers, and was slightly delirious at night. On October 25th, while sitting upon the edge of the bed, he suddenly fell upon the floor, and it was soon determined that he was aphasic and was paralyzed upon the right side. He died on October 24th at 10.10 P.M.

At the autopsy, made by Dr. Satterthwaite, there were found hypertrophy of the left ventricle of the heart with normal valves, hypostatic œdema of the right and embolic pneumonia of the left lung, atheroma and thickening (no ulceration) of the aorta and other arteries, chronic diffuse nephritis, thickened cerebral pia mater, marked atheroma of the arteries of the circle of Willis, thrombosis of the posterior branch of the left middle cerebral artery, and a small cortical hemorrhage on the convexity of the brain just anterior to the fissure of Rolando.

The query was whether the aphasia and hemiplegia were due to the hemorrhage or to the obstruction in the artery. Dr. Robinson thought it probable that the thrombus was the principal cause of the aphasia.

Dr. Robinson also presented a

CHOCOLATE-COLORED FLUID REMOVED FROM AN ABDOMINAL TUMOR,

with the following history: The patient was forty-three years of age, had been in good health until fourteen days ago, except that her menses had been somewhat irregular. At that time she began to suffer from pain in the right iliac region, which was attended by slight fever. Ten days afterward she went to bed on account of the pain and general discomfort. No pain in micturition or defecation. On admission to St. Luke's, her urine was found to be normal, the cervix elongated but not patulous, uterus normal in size and position, but immovable, and bound down by a large firm mass in the right side of the cul-de-sac. Diagnosis, pelvic cellulitis and peritonitis. The hot-water vaginal douche, iodide of potassium with bichloride of mercury, $\frac{1}{100}$ of a grain dose, were prescribed. About two weeks afterward a fluctuating tumor could be felt in the posterior cul-de-sac of the vagina, which was aspirated, and six ounces of chocolate-colored fluid removed, which under the microscope showed degenerating pus-cells, fatty matter, degenerated and pigmented epithelial cells, but no blood-corpuscles. The fluid had a slightly fishy odor. Two days after the aspiration there had been no rise of temperature or other unfavorable symptoms. Four days subsequently there was no pain and no discharge.

Dr. Wylie referred to a case occurring in his service at Bellevue Hospital, in which there was evidence of pelvic cellulitis with suppuration. The mass was aspirated, and instead of pus, perfectly clear transparent fluid was obtained, and the patient went on at once to complete recovery.

Dr. Janeway said that such a fluid as that presented by Dr. Robinson could come from a cavity where hemorrhage had occurred with the inflammatory process.

Dr. Janeway presented a series of specimens, removed from one body, which illustrated

CHRONIC HEPATITIS, CHRONIC SPLENITIS, CHRONIC PERICARDITIS WITH CALCAREOUS DEGENERATION, CHRONIC PLEURITIS, CHRONIC PERITONITIS.

The chief interest in the specimens consisted in the intercurrence of so many fibrous thickenings, with calcareous degeneration in one, in the same body. The liver weighed eighty-six ounces. The increase in connective tissue was mostly about the ramifications of the portal veins. This explained the ascites from which the patient died and for which he was tapped fourteen times.

Dr. Janeway also presented a specimen of

CHRONIC PERITONITIS.

It was removed from the body of a woman who had been tapped twenty times during the last seven

years. In the right iliac region a tumor was recognized during life, and at the autopsy it was found that it had been formed by the agglutination of the coils of the small intestine to each other. An interesting clinical feature was paralysis of the right leg, which was explained at the autopsy by the existence of a large amount of peri-rectal and post-rectal tissue, that at the upper part of the pelvis pressed upon the internal iliac artery. There was a thrombus in that vessel near the bifurcation of the common iliac.

The Society then went into executive session.

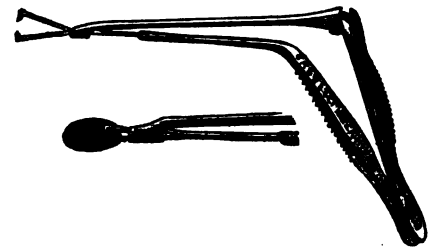
Correspondence.

PARTIAL SEVERANCE OF THE AURICLE FROM THE HEAD FOR THE REMOVAL OF FOREIGN BODIES FROM THE EAR.

To the Editor of The Medical Record.

Sir: Will you kindly grant me space to make a few remarks suggested by reading the report of a case by Dr. Buck in The Record of December 16, where the auricle was partially severed from the head in order to remove a locust-bean from the ear? Nearly all otologists will agree with me, I believe, in the statement that the hearing organ is most liable to be injured in the removal of foreign bodies when the patient is a child. In such patients ineffectual attempts are more frequent, because the sufferer cannot keep quiet under the manipulations necessary, and, unless he is put under the influence of an anæsthetic agent, the operator, whoever he may be, is very frequently more likely to push the object farther into the ear than remove it. In Dr. Buck's case, he found, indeed, that the efforts of the village physician, to whom the child was first taken, had at one or more points torn the external auditory canal, which was bathed in a bloody secretion; but, fortunately, the bean had been impacted in the canal before being pushed down against the drum-head. Under these conditions, Dr. Buck himself made determined but ineffectual efforts with steel hooks to dislodge the bean, with the effect, possibly, of only wedging it more tightly in the canal.

I can sympathize with the operator in encountering a case of this kind, for the removal of locust-beans from the ear was brought to my notice through a difficult case which I was requested to see in consultation with Dr. Henry D. Joy, some two years ago, and which was reported in the *American Journal of Otology*, vol. iii., p. 144. The case was very similar to Dr. Buck's, with this exception: the boy was two years younger, and the drum-head had been ruptured by the ineffectual efforts made to remove the bean before he came to Dr. Joy. Fruitless attempts in this case to find any forceps that would retain a hold on the smooth hard surface, or any curette or hook that could be successfully used, suggested the construction of forceps that could be relied upon in such cases in the future. This object was accomplished, and the instrument, as made by Mr. Ford, was described, with an illustrative cut, in the *American Journal of Otology*, vol. ii., p. 298. Many others, as well as myself, have since then had it in constant use, and I believe with satisfactory results. With this instrument the cortex or shell of the locust-bean can be readily penetrated, and securely held in the pivot-like grasp of the two opposing teeth, which allows the bean, or other object, to rotate on the axis of the "bite," and thus adapt itself to the walls of the canal as it is withdrawn. In skilful hands (and by none other should it be employed), the oval or even flat surface of an object in the canal of the ear may be seized without danger of pushing it farther into the ear. I have thus removed objects as large as, or even larger than the locust-bean from the ears of children, such as glass beads, brass buttons, gold shirt studs, sea-shells, pebbles, pieces of glass, sequestra from the temporal bone, etc.



With respect to the somewhat severe, and to the friends alarming, operation of detaching the auricle for the removal of foreign bodies that children themselves have slipped into the ear, I should myself hesitate to adopt so grave a procedure for the accomplishment of the object in view, trusting rather to careful manipulation, which has, with the efficient instrument already alluded to, in a large experience of my own always been found to be successful.

Dr. Buck, in concluding his paper, draws attention to the great amount of damage to the osseous canal that may be done with impunity. This fact should be borne in mind when contemplating the removal of an impacted foreign body from the ear, for in certain cases it may be better to risk some laceration of the canal than allow an irritating foreign substance to remain impacted in close proximity to the drum-head for many days—in Dr. Buck's own case it remained for nearly a week—before removal, lest, as happened in his case, a chronic purulent inflammation of the middle ear be established.

It occurs to me in this connection, that where secretions from the canal only are present in these cases, the swelling of the parts would be increased by frequent douchings of any kind which macerated the tissues, and I should myself prefer to employ drying agents. If the foreign body should be by chance a locust-bean, the moisture and heat of the canal would be likely to favor its germination and consequent enlargement. My own experiments with these beans, which Dr. Joy published with the case above alluded to, showed that when placed in water, even at a temperature of 65°F., there was rapid swelling of the seed, and the shell was easily picked open at one end.

Very truly yours,

Samuel Sexton, M.D.

12 West Thirty-fifth Street, New York,
December 16, 1882.

Propylamine in Chorea.—Dr J. H. Carstens reports (*Detroit Clinic*) several cases of chorea cured apparently by the use of propylamine. The drug was given in four-grain doses three times a day.

HOW PUERPERAL FEVER MAY BE PREVENTED.

To the Editor of The Medical Record.

Sir: In a recent number of The Record I noticed some statements made by the visiting surgeons of the Maternity Hospital, New York, with reference to the frequency of the occurrence of puerperal fever in time past in that institution. One of the gentlemen alleges that it was due, to a great extent, to the unhealthy hygienic and atmospheric conditions to which the women were exposed while in the waiting wards of Charity Hospital prior to their removal to the Maternity Hospital proper, and that since the waiting wards were transferred to the pavilions the records have been much better. Now, from personal experience while house physician at Charity Hospital, I doubt the correctness of the inference drawn from the improved mortality rate. In my experience, the women actually confined in the waiting wards did better, as a rule, than those delivered at Maternity, and this fact was even recognized by the women themselves, who had a wholesome dread of the Maternity Hospital, and would often conceal their pains until labor was too far advanced to admit of their transference to that institution. It was the custom, too, to deliver all the women in the waiting wards upon the development of puerperal fever at Maternity. The women so delivered, in my experience, did uniformly well. Certain of the women who were affected with syphilis, malaria, renal disease, or other affections, were always retained at Charity to render the Maternity records as favorable as possible, but notwithstanding this fact the record of the waiting wards was excellent.

During my term of service there happened to be an outbreak of puerperal fever at the Maternity Hospital on two occasions, as a consequence of which the Maternity service was transferred to the waiting wards, which soon became overcrowded. The women were then delivered in several pavilions which had been used for cases of erysipelas the year previous, and in which a number of the worst forms of the disease were treated. What means of disinfection were taken I do not know, as the pavilions were said to be in readiness and required nothing but scrubbing and ordinary cleaning to prepare them for obstetrical wards. Even under these circumstances the record of Dr. Wood, the gentleman who had the service as house physician after my term had expired, and who had no advantages supposed to be derived from a selection of cases, inasmuch as all the women were confined in the pavilions indiscriminately, was the best that had been obtained for some time. I should mention the fact that during the time of my service in the waiting wards I also had a large venereal service in which quite a number of operative surgical cases arose.

Now it seems to me that the difference of results was not due to the different surroundings of the patients, which were as unfavorable as possible according to our present views, as compared with those to be obtained at Maternity Hospital, which was completely isolated from the hospital proper, but to the fact that the let-alone policy was generally followed at the hospital. Dr. Wood was especially favorable to the let-alone plan, not allowing any syringing whatever unless there was some special indication for it. and there was no disputing the fact that his patients did well, especially as compared with those of some of the gentlemen who regarded labor as a pathological rather than a physiological process, and one requiring the most energetic measures in order to preserve the life of the woman. I was in the habit of interfering rather less than had been customary, but am convinced that my own patients would have done better had I let them more severely alone. In my capacity of resident surgeon of the State Emigrant Hospital, I had an opportunity of observing the obstetrical records of that institution, and I found that puerperal fever was there almost unknown. Now I think that this was due to the fact that the women were let alone, being delivered by a midwife, and the doctor never touching them unless some complication or unfavorable symptom developed, merely making a daily inspection of the ward which was in the hospital building proper. The results of my observations have been such as to lead me to believe that as a rule we are many of us inclined to interfere too much with our obstetrical cases, and that we had better give Nature the same chance that she had before syringes and "germs" were invented. Not but that I fully recognize the potency of those same minute organisms, and appreciate the value of antiseptics and kindred measures, for I freely acknowledge their usefulness, but I am firmly convinced that less interference with our obstetrical cases, even in public hospitals, is in order.

G. Frank Lydston, M.D.,
Late Resident Surgeon, Charity and State Emigration Hospitals, New York.

Chicago, Ill.

THE CARE OF THE CHRONIC INSANE.

To the Editor of The Medical Record.

Sir: The enclosed slip from a Dutchess County newspaper has medical value.[1] It relates to action by the Supervisors of that county, and involves questions in which the interests of the insane in the counties of New York and Kings are especially interested.

More than two-thirds of the cost of the care of the insane of the State are borne by the counties of New York and Kings, and yet the care of their own insane is a constant subject of dissatisfaction on the part of the medical men who bear the grievous burden of the work in the county institutions, and who are exposed to criticism for not doing what, in the very nature of the case, it is impossible to do. The State Hospital at Poughkeepsie has three hundred acres of land. More land could be got near by, if desired. It suffers in its internal economy, and therefore damage is done its beneficiaries by the process, which is now constantly going on, of drafting the chronic insane from its halls and sending them to Willard's and Binghamton. The true policy is to have the chronic insane at Poughkeepsie, and to provide with State funds for the erection of cheap, substantial lodging-houses for them there, adding workshops and amusement-sheds and school-rooms, so as to make it possible to provide the desirable occupations at all seasons for the patients, and thus obtain through their industry a portion, at least, of the cost of their maintenance. The idea, at present in full operation in the State, of gathering the acute insane in one institution and the chronic in another, is both unscientific and inhumane, and as bad as it can be in an economic point of view. An asylum for chronic cases comes to be considered by

[1] [This refers to a series of resolutions passed by the Board of Supervisors of Dutchess County, pointing out the necessity of caring for the chronic insane nearer their homes, and urging the establishment of a department for the same in connection with the Hudson River State Hospital at Poughkeepsie, N. Y.—Ed.]

the popular mind as a place for incurables, a place on which may be inscribed, "No hope enters here," and the influence of that consideration, sooner or later, pervades the asylum itself, and scientific interest in the scrutiny of the inmates, case by case, dies out, and you have a mere poor-house with scarcely a vestige of a hospital or sanitarium about it. Fortunately, we have at our asylums for the chronic insane medical men who are alive to this danger and are preparing to meet it.

The only relief for the overcrowded asylums of our County of New York is colonization, and the first colony should be a thousand or fifteen hundred from Blackwell's and Ward's Islands sent to Poughkeepsie, and there so treated as to be not only provided with every possible aid to their recovery, but taught to yield a portion of the cost of their maintenance, and provision also made, by giving small wages to many of them for work done, to sustain themselves in their occasional visits to the communities from which they may have come, or to start in life again.

Yours respectfully,
C. R. AGNEW, M.D.

THE QUESTION OF VICE AND DISEASE IN INEBRIETY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have long ago ceased to notice any criticisms or doubts concerning the disease of inebriety or its relations to vice, simply because the subject was not one of opinion or theory, but of facts, within the range of every physician to examine and test for himself.

Frequently I have requested some of the more emphatic defenders of the half vice and half disease theory of inebriety to send me the clinical histories of cases which seemed to support their views. So far no one has ever responded.

The doubts suggested by Dr. Stair in a late number of THE RECORD cannot be answered by argument, but only by appeal to accurately observed facts, seen in the history of cases found in every neighborhood. The observer must put aside all theory and enter upon his work with a true scientific spirit, having no other object except to ascertain the facts, never being satisfied with half truths or meaningless terms to describe unknown states of the body.

Dr. Stair will find satisfactory answers at this bar of inquiry, above the levels of moral discussions and the speculations of untrained, incompetent men.

It may be of interest to group some general facts, which the present study of the subject amply confirms.

First.—All clinical study of cases reveals a physical chain of causation more or less distinct, following a line of march that is traceable. The so-called vice element is always less distinct than in insanity or general paralysis. The term vice is found in all cases to express ignorance of the present condition, as it has always been used in every scientific inquiry.

Second.—The responsibility of inebriates is governed by the facts of each case. No general rule can be made to apply to all. In some cases pronounced irresponsibility exists from the onset. In others a degree of increasing failure to comprehend the nature and character of their acts may be apparent.

Third.—Inebriety is always influenced by surroundings and conditions more or less unknown.

In many instances all the physical characteristics of inebriety are present, and yet the patient is temperate. Like the vast army of neurotics, he is on the border land, likely any moment to become an inebriate. Such persons may explode into inebriety or go down a long lifetime free. This is only one of many phases at present unknown, and yet obviously the result of physical laws and forces. No theory of moral education, will-power, or vice will explain it.

Lastly, inebriety cannot be reasoned out from theory and logic, no more than the interior of Africa can be known by these means. It is a medical subject, and must be studied from a medical and scientific standpoint before we can know anything of its nature and character.

T. O. CROTHERS, M.D.

HARTFORD, CONN., December 15, 1882.

Obituary.

SIR THOMAS WATSON, M.D., F.R.S.,

LONDON, ENGLAND.

THE death of Sir Thomas Watson, which has for some time been anticipated, was announced by cable last week. Up to within the past fifteen or twenty years, no name was more familiar to medical practitioners than that of Watson. His lectures formed by far the most popular text-book on the practice of medicine, and were for a long time almost exclusively used.

Sir Thomas Watson was at the time of his death one of the physicians-in-ordinary to the Queen. He was born at Kentisbeare, Devonshire, in 1792. His education was received at St. John's College, Cambridge, he being graduated as tenth wrangler, with the degree of B.A., in 1815. He was given the degree of M.A. in 1818 and M.D. in 1825. He was elected a Fellow to the College of Physicians in 1826, and since 1862 has been its President. From 1827 to 1840 he was one of the physicians to the Middlesex Hospital, and for some time was Professor of the Practice of Physic in King's College, London. He was physician-extraordinary to the Queen several years, and was appointed a physician-in-ordinary June 12, 1870. He was created a Baronet in 1866. His literary work is mainly comprised in the "Lectures on the Principles and Practice of Physic, Delivered at King's College, London."

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 9, 1882, to December 16, 1882.

BANISTER, J. M., Assistant Surgeon. To proceed to Camp on White River, Colorado, and report to the Commanding Officer. Par. 7, S. O. 250, Department of the Missouri, December 11, 1882.

HALL, W. R., Assistant Surgeon. Granted leave of absence for one month. Par. 8, S. O. 250, Department of the Missouri, December 11, 1882.

PORTER, J. Y., Captain and Assistant Surgeon. To proceed to St. Francis' Barracks, St. Augustine,

Fla., and to report to the Commanding Officer of that Post for temporary duty. Par. 2, S. O. 119, Department of the South, December 11, 1882.

WYETH, M. C., First Lieutenant and Assistant Surgeon. Granted one month's leave of absence. Par. 4, S. O. 206, Department of Dakota, December 8, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 16, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Dec. 9, 1882.	0	13	42	5	42	34	0	0
Dec. 16, 1882.	0	10	60	4	30	48	0	0

GRAVE-PLUNDERERS IN RICHMOND, VA., AND PHILADELPHIA, PA.—It is stated that Oakwood Cemetery, near Richmond, Va., has been systematically robbed for a long time, the bodies being used by the Virginia Medical College. Recently two medical students and two colored persons were arrested at the cemetery while about to engage in exhumations for the benefit of anatomical science. They have been sentenced to six months' imprisonment.

The arrests made in Philadelphia have excited wide attention, and it is found that some of the authorities of Jefferson Medical College are implicated. Eight indictments against Professor Forbes, of that College, for complicity with resurrectionists were presented by the Grand Jury on Wednesday last.

While the practice of grave-robbing is to be greatly deplored, it is only fair to say that it does not often occur in States or cities where there are proper provisions for supplying material to the colleges.

DEATH OF DR. MICHAEL HOGAN.—Dr. Hogan died at his residence in New York, December 17th, in the sixty-fourth year of his age. He was born in Ireland, and received his medical education in Dublin. He was a member of the County Medical Society and New York Academy of Medicine.

CHANGE IN HOSPITAL SERVICES.—A six months' service by the attending physicians and surgeons of St. Luke's Hospital has been inaugurated. A doubling of the house-staff has been asked for. A similar lengthening of service is proposed for New York Hospital.

PATENT MEDICINES AND EPIDEMICS.—When diphtheria becomes epidemic in a city the advertisements of patent medicines suddenly experience a change. What were advertised as a sure cure for chilblains, scald head, vermin exterminator, polish for brass knobs, etc., are now warranted an infallible remedy for diphtheria.—*Norristown Herald.*

FOLLOWING UP A WINTER COLD.—At the very inception try to abort it with hot drinks, quinine, and a sweat.

In the early dry and congestive stage give cubebs or ammonia muriat.

After the dry stage, when the cough is loosened, give an anodyne (*e.g.*, chlorodyne) with mildly stimulant vapor inhalations (oleum pici, tr. benzoin co., etc.)

When the secretions become freer, use the steam atomizer night and morning with mild, slightly astringent alkalies (benzoate of soda dissolved in bicarbonate of soda, etc.).

If the stage of the profuse muco-purulent discharge sets in, the strength of the astringents should be increased. Finally, the air-tube atomizer should be used with solutions of argenti nitrat., gr. ij. to ʒ vj., or zinci chlorid., gr. ij. to ʒ vj.—*F. H. Bosworth in The Independent Practitioner.*

THE MEDICAL COLLEGE OF VIRGINIA, says the *Southern Clinic*, offers to educate forty young men free of charge, and to do the charity practice of Richmond city free of charge, and to attend to the midwifery practice of the city also free of charge. The editor of the *Clinic* offers in the way of competition, to pay fifty cents to each patient who will call upon him.

Our Virginian brethren do not seem to live in that peaceful harmony which should characterize the members of the noblest of professions. Why not readjust.

PASTEUR VS. KOCH.—Prof. Dr. Robert Koch published in the report of the Imperial Sanitary Bureau, of Germany, experiments which disproved, as he alleged, the statements of Pasteur regarding the rôle of earthworms in the propagation of charbon and regarding the attenuation of charbon virus. M. de Feltz has just presented to the Academie des Sciences the results of another series of experiments. These confirm in all points, he says, the conclusions of Pasteur.

MASSACHUSETTS LAW TOLERATING BOGUS MEDICAL COLLEGES.—Charles J. Eastman, Rufus K. Noyes, and W. D. Corken, corporators and officers of the Bellevue Medical College, of Massachusetts, recently arrested on the charge of issuing bogus diplomas, were examined before Commissioner Hallett, December 15th, on charges of using the mails for fraudulent purposes. Evidence was offered by the Government, and not contradicted, to the effect that the "college" had issued degrees and diplomas to individuals grossly ignorant of the theory and practice of medicine and after a farcical course of instruction covering a few weeks or less. Defendants claimed simply that they were empowered to do all that was alleged by the laws of Massachusetts. It appeared that the institution was legally incorporated and that according to the corporation laws and its charter it enjoys all the privileges of other medical colleges, which was admitted by the Government attorney.

Commissioner Hallett, in giving his decision, said if the Faculty choose to issue degrees to incompetent persons the laws of Massachusetts authorized it. The defendants are therefore discharged.

Thus ends the case for the present. "Dr." Noyes has received a good advertisement, and his college is pronounced legal. The preposterous nature of the law which shields his college, however, is shown most clearly, and it seems impossible that the medical profession and Legislature of Massachusetts will tolerate it much longer.

GRAVE-ROBBING IN MONTREAL AND IN NORTH CAROLINA.—A species of kleptophobia, as regards the buried dead, seems to be affecting the people in consequence of the detection of the Philadelphia robberies. A telegram from Montreal states that the recent robbery of graves in cemeteries adjacent

to that city has created a general feeling of alarm, especially in the rural districts, and the people are organizing for the better security of their dead. Three bodies were stolen from a vault in the burying-ground of St. Anne, several days ago, two were exhumed at Chambly and carried away, and several corpses were recently stolen from the burial-ground at the Oka Indian reservation.

Rumors of grave-robbing near Greensboro, N. C., are also circulated.

THE DEATH OF WILLIAM PIRRIE, M.D., C.M., LL.D., F.R.S.E., is announced. Dr. Pirrie was the leading surgeon in the north of Scotland. His chief literary works were his "Surgery," which has run through three editions in England, and five editions in America; and his treatise on "Acupressure," published in 1867.

DEATH OF DR. JOHN FORSYTH MEIGS.—On December 16th Dr. J. Forsyth Meigs died of pneumonia, at his residence in Philadelphia, at the age of sixty-four years. Dr. Meigs was widely known in this country as joint author with Dr. Pepper of one of the best and most popular text-books on children's diseases ever published in the English language. Dr. Meigs was born in Philadelphia in October, 1818, and was the son of Professor C. D. Meigs. He was graduated from the medical department of the University of Pennsylvania in 1838, and has always practised in Philadelphia, where he had occupied many prominent positions.

THE TRAINING-SCHOOL FOR NURSES AT BELLEVUE HOSPITAL is in need of money and has had to take some of the nurses from the hospital wards in order to send them out as private nurses. The Medical Board has made an appeal to the public for funds. The school depends solely upon the earnings of the pupils and public contributions.

THE PROPOSED HOSPITAL FOR CHILDREN.—Arguments were made last week before the Commissioners of the Sinking Fund in favor of establishing a hospital for children suffering from contagious diseases. The following facts stated by Professor Chandler are of interest: In 1881, out of 7,338 cases of scarlet fever among children in this city, 1,964 cases were fatal. In that year there were 5,272 cases of diphtheria among children, of which 2,249 resulted in death. There were 444 deaths from typhoid fever, 461 from cerebro-spinal meningitis, and 160 from typhus. Measles had also proved fatal to many children. The total number of cases of contagious diseases among children reported to the Health Board last year was 19,157, and 6,160 of these resulted in death. The great majority of these cases were in tenement and apartment houses, and the mortality would have been largely reduced if the children could have had proper medical treatment and good nursing. The death-rate was at least one-third higher than it should be.

It is proposed to establish the hospital at the foot of East Sixteenth Street.

A NEW YORK HOSPITAL DISTURBANCE.—A charity patient in New York Hospital made complaint last week before the justice, of assault and brutal treatment by an orderly. He asserted that the orderlies paid little attention to charity patients unless they were feed. The complaint was dismissed by the justice.

AMERICAN GYNÆCOLOGY SEEN THROUGH ENGLISH SPECTACLES.—In the preface to the fourth edition of Dr. Tilt's work on "The Change of Life," this author gives vent to the following strictures on American gynæcology: "Simpson devised the slitting of the womb for sterility, but when transplanted into America, his operation, in the hands of Dr. Marion Sims, became one for the cure of most diseases of women. It is difficult for us, simple-minded Englishmen, to withstand American advocacy of surgical operations. They speak with the prestige of ovariotomy, successful after having been pooh-poohed for a quarter of a century by all the great surgeons of Europe. They dazzle us by prodigious statistics, of which cases given in detail are few, while failures find no place; so, when Dr. Marion Sims told us that in a short time, in one hospital, he had cured 500 women of all sorts of uterine diseases, by slitting the cervix up to the body of the womb, the more experienced among us were very much astonished, while the younger men rushed off to the instrument-maker's, and followed the new light at a slower pace, suitable to our placid nature. They soon found, however, that the operation did not fulfil Dr. Marion Sims' promises; that it was sometimes attended by very serious accidents; and then they heard that Dr. Sims' most promising pupil was busy sewing up the wounds he had helped his teacher to divide. Some time ago we heard again from America that Dr. Emmet had discovered a new operation for the speedy cure of the ordinary run of uterine cases. This new operation was again supported by hundreds of cases, not only of his own, but also of his pupils'; cases without definite particulars, and without mention of failures, dangers, or of deaths. As some of our American friends express surprise that we have not adopted this new operation with the same enthusiasm as we did Dr. Marion Sims', it is worth while considering what we are now asked to do.

"I gave it to be understood, that until Simpson made his mark, somewhat too large a part was given to inflammation for the explanation of uterine pathology. Since then the tendency has been to undervalue the importance of this most important element of general pathology and of daily practice.

"Dr. Emmet, for instance, does not take the trouble to discuss what relates to inflammation in his voluminous work; he simply asserts that the womb cannot be acutely inflamed, except after parturition; in his large practice he seems never to have met with cases of acute internal metritis, than which I have never seen a disease so sharply accentuated or less amenable to treatment. As for chronic inflammation of either the substance or of the lining membrane of the womb, he says it is a sheer impossibility. Thanks are due to any man who will frankly say what he thinks on any important matter; but when writing 855 pages on diseases of women, to dismiss in two pages the relations of inflammation to diseases of the womb, is neither scientific nor scarcely respectful to what has so long stood as the keystone of uterine pathology; but let us see what Dr. Emmet puts in its place.

"Subacute or chronic inflammation of the cervix, which so often shows itself by uterine ulceration, is for him a myth, a delusion, and nothing but the everted rim of a more or less lacerated cervix. He considers the womb to be so little up to its work, as to be always lacerated by parturition, and that what has hitherto been known as ulceration, is nothing but uterine ectropion. This theory, however, cannot possibly explain the same kind of uterine ulceration often met with in married women who are sterile, and sometimes in single women;

so I may ask to be credited when I affirm that endocervicitis and ulceration are often met with in women who have borne children, without being caused by laceration.

"Dr. Emmet asks us to treat these comparatively mild cases by extensive division of the neck of the womb, sufficient paring away of tissue, and by resewing of the divided cervix.

"But this is not all, while admitting that nature often heals whatever laceration may have occurred, he maintains that it does so after a bungling fashion, by means of a very untrustworthy kind of a cicatricial tissue, which is to be cut away, says the master, 'if the cervix be large, or causes neuralgia;' to be cut away, wherever found, and under all circumstances, say the pupils, for fear of future mischief.

"So now, in America, the womb is to have no peace; if its mouth be surrounded by a rim of ulceration, a delicate and serious operation is to be performed; and however sound the tissues may be, the same operation is recommended, should it be possible to detect any trace of a long-healed laceration. Of the many patients attended by me during the last thirty years, I cannot remember a bad case of cacoplastic cervix with endocervicitis that I have not been able to cure by preliminary intercervical incisions, deep enough to drain long-congested tissues, followed by potassa fusa cum calce, and the subsequent dressing with tincture of iodine, so I do not see why the risk of a much more dangerous operation should be run, even in bad cases, except in a limited number that I have not time to specify. We are not, however, allowed to reserve tracheloraphy for long-standing cases of cacoplastic cervix with endocervicitis; we are actually asked to adopt this operation as the best means of curing the comparatively mild cases of endocervicitis and ulceration, when the cervix seems otherwise healthy and not much larger than usual. These cases can be cured in two or three months by such applications as the acid nitrate of mercury, or nitrate of silver, coupled with proper medical treatment, and it would be preposterous indeed to treat them by tracheloraphy. At all events, the question is now before the profession, and the ever-increasing number of highly intelligent general practitioners, who become our judges on ceasing to be our pupils, know well how to discount the hobbies of metropolitan authorites, and the decision may be safely left to them.

"I have seized this opportunity of entering another protest against the too frequent use of the knife in the treatment of uterine affections, but it must not be supposed that I consider what precedes to be necessary for the safeguarding of the interesting objects of my solicitude in the present work. No, they have fortunately reached that most enviable time of life when the womb is well nigh safe from the onslaught of American surgery and the more vexatious, permanent irritation of pessaries that do not fulfil their object. The comparatively peaceful tenor of pathology at the change of life has reacted favorably upon the author. He knows that he will no longer be called upon to oppose the crotchets of esteemed fellow-laborers, and that in a perfect spirit of peace, he may set himself to describe the closing scenes in the life of woman."

Occlusion of the External Auditory Meatus.—Three cases are reported from the clinic of Dr. Samuel Sexton by the Resident Surgeon of the New York Eye and Ear Infirmary, Dr. Orr. The first case was a man, aged thirty-nine, who fell six feet from a truck and struck the left side of his face upon the hard pavement. A branch of the temporal artery was severed, and the parts about the temple were much contused. Four days after the accident a sanguino-purulent discharge from the left ear occurred, and when Dr. Sexton saw the patient at his clinic, six weeks after the accident, a tegumentary membrane closed the entrance to the external auditory canal. There was, however, a slight cicatrix, but the parts had generally the appearance of a congenital occlusion. The operation for the relief of this difficulty was performed without an anæsthetic. It consisted in forcing a narrow probe-pointed tenotomy knife through a minute sinus, which was believed to enter the canal at its posterior-superior margin, and by a circular incision removing a portion of the integument one-fourth of an inch in diameter. A silver speculum was then introduced into the newly formed meatus and retained by a bandage. Before the operation the patient had stated that he was not aware of the existence of the occlusion, and as there was a history of otitis media duplicata in childhood, it was at first suspected that the closure might have long existed. Subsequent to the operation, however, a small polyp and a large wad of cotton-wool saturated with the secretions were removed from the canal. The appearance of the wool indicated that it had been immured but a short time.

The hearing, which before the operation had been almost *nil*, was entirely restored. The drum-head was found to be intact, and but little affected by the surrounding inflammation. Dilatation, which had to be kept up for some weeks after the operation, was accomplished by the introduction of cotton-wool tents smeared with ung. calendulæ ex herba recenti. The parts finally assumed a very natural appearance, and the vertigo and tinnitus aurium, both of which had been very distressing before the operation, entirely disappeared.

The second case was a man, aged sixty-two, who, at the age of eight, received a blow from a horse's unshod hoof, severing the left auricle from his head. The auricle had been replaced and bound to the head by bandaging, but healing was not completed, the patient states, for eighteen months. Owing to the misplacement of the auricle the entrance to the external auditory canal was completely closed by integument, so that its exact location was difficult. A minute sinus remained, however, through which the patient could force a thin matter by pressure in front of the meatus. Patient could hear a loud voice on this side. He refused to have an operation performed for his relief.

The third case was a child thirteen years old. During the first weeks of her life the right external auditory canal was the seat of an otitis externa acuta, with much granulation-tissue, which was irritated by scratching. The auricle was deformed by the existence of adhesive bands, which united the margin of the concha to neighboring tissues. The canal was closed at the junction of the osseous with the cartilaginous portions by integument. Hearing in the affected ear was almost *nil*.

Dr. Sexton was of the opinion that in cases like the two latter above alluded to, an operation should be performed without delay, should symptoms arise pointing to middle-ear trouble, for the case would be much complicated by any closure preventing the escape of secretions outwardly through the external auditory canal.—*American Journal of Otology.*

The louder the quack the longer the bill.

A Case of Congenital Complete Hepatic Hernia.—Dr. Wm. J. McMahon sends us an account of the following interesting case: From the rarity of hepatic herniæ it seems desirable to mention the following case, occurring in his service at the St. Vincent de Paul Colored Asylum. The child, at birth, presented a tumor at the umbilicus measuring two and a half inches in diameter, and with an elevation of one and a half inch. On examination, conducted by himself and Dr. H. E. Turner, the hernia apparently protruded through a separation of the abdominal muscles at the umbilicus, covered only by the peritoneum. Although no satisfactory conclusion was arrived at as to the contents of the sac, still nothing giving evidence of the presence of intestine or mesentery could be discovered. Subsequent examinations also failed to throw any light upon the subject. The tumor gave dulness on percussion over its entire surface, the bowels were regular in their action, and the stools perfectly natural. The child was nursed from the bottle, took food well, and although there was a slight malformation of the genital organs, yet the kidneys acted well and freely. An attempt at reduction was at once made, but without success. Constant pressure by means of a compress saturated with carbolized olive oil was then applied, but with no effect on the hernia beyond a thickening of its covering. The child emaciated rapidly, developed a condition of general jaundice, and finally died on the ninth day, the appearance of the hernia assuming a dark green hue, but otherwise remaining unchanged. At the post-mortem the umbilical cord was found attached to the centre of the hernia, with a deviation toward its lower border, where some indications of sloughing were present. The abdomen was opened on the right of the tumor, and the contents examined from within outward. The hernial sac was found completely occupied by the liver, displaced, and so firmly attached that its separation caused rupture of the peritoneal covering, which, in this situation, though more or less degenerated, measured one-tenth of an inch in thickness. The heart, lungs, kidneys, and spleen showed an advanced degree of development, sufficiently for a child of one year.

Stretching the Median Nerve.—In hunting, a man was shot in the left arm. Paralysis of the forearm set in, with excessive pains. The piece of lead could not be found. The median nerve was paralyzed, and the muscles of the forearm and hand atrophied, the pains being intolerable. An incision 3 ctm. long was made, the enlarged and indurated nerve laid bare and stretched. The wound healed, *prima intentione*. The pains were then moderated and more of a neuralgic character, and after a while they disappeared entirely. The paresis of the muscles diminished, and by galvanic treatment the patient was cured.—*Le Praticien.*

A Curious Electrical Phenomenon.—A remarkable instance of the development of electricity by friction has been brought to light in a Berlin brewery. The building is constructed of stone and iron, with the floors laid in asphaltum. In the upper part of the malt-house is a malt-cleaning machine, from which the cleaned malt is conducted, through an iron shoot, to wagons, for distribution through the works. If the malt-cleaning machine remains a long time in operation—which frequently does occur without intermission for three weeks at a time—electricity is developed by friction of the malt in the iron shoot, and in the most insulated portions of it. Such is the tension of the electricity that sparks continuously flash here and there, the malt crackles throughout, and sparks fly from it to the hands of the employés. The men at first thought this was a demoniacal exhibition, until an expert calmed their fears. This gentleman, Herr Nehrlich, brought the subject before the Electrotechnical Union, and the discussion thereupon elicited statements from several members who had noticed similar appearances in other breweries, etc. Dr. Werner Siemens showed how, through the existence of the asphalt floors, the malt-room is so insulated from other portions of the building that it electrically resembles a Leyden-jar.

The Proportion of Persons who can be Hypnotized.—Dr. Liébault (*Revue Médicale de l'Est*) found that among 1,014 persons whom he attempted to hypnotize, 27 were entirely unaffected, 33 were only made tired and sleepy, while the remainder could be put into conditions varying from light sleep (100) to the profoundest somnolence.

A Somewhat Unique Case of Opium Addiction.—It is now nearly ten years since we began giving attention to the study and treatment of opium addiction. Dr. J. B. Mattison, of Brooklyn, N. Y., writes: "In all the cases coming under our care, and they number not a few, there has not been an exception, save a single instance, to the assertion made some years ago in this and other journals, that the vast majority of opium *habitués* become such *not* from *choice*, not from merely vicious indulgence, an idea mistakenly held by many both in and out of the profession, but from a *physical necessity*, having, ordinarily, its genesis in some painful ailment demanding the use of opium, which when its legitimate need was fulfilled had forged around its unsuspecting victim a chain so powerful that self, unaided, was powerless to break. Of this fact, to my mind, there is no question, for among those under observation have been men from various walks of professional life, mainly, much as it may cause surprise, from my own fraternity; men ordinarily of iron will; men who have faced death on battle-field and in prison-pen; men of strong mental parts, notably among them one filling a leading seat in the higher council-hall of the nation, whose brilliant intellectual accomplishments surpassed those of any public man whose acquaintance we have had the honor to enjoy, and the personal testimony supported by the clinical history of them all has proven beyond dispute that their opium taking was an *absolute necessity*, before which the will resistlessly went down. We well know that many maintain an opposite opinion, and are disposed to extend censure rather than charity to these unfortunates, but I have no hesitation in expressing the profound conviction, based upon years of observation, that this is a most mistaken view of the subject, and that opium *habitués*, as a class, instead of being maligned and misrepresented, as so often is done, deserve commiseration and the same measure of sympathy as we would desire had this 'horror of deep darkness' fallen on us. The exceptional case to which allusion has been made, came under our care during the past year, and presents a factor in its etiology somewhat unique, and of special interest to any professional gentleman whose zeal in the pursuit of therapeutical knowledge may tend to outrun his discretion. Dr. A. B——, was attacked by facial neuralgia, so

severe as to compel his taking one quarter of a grain of morphia hypodermically, at bedtime, to secure ease and sleep. This amount was increased to one-half a grain per diem during the following month, when, the neurotic disorder having subsided, the opiate was abandoned with little or no inconvenience. Some time after this, a gentleman addicted to the use of morphia placed himself under his care. Then Dr. B——, as he asserts, without the least desire for opium, but solely from a wish to discover, if possible, some antidote drug to aid him in the cure of this patient, began experimenting on himself with hypodermic morphia, with the result of falling a victim to its seductive influence, and yet, though he failed to make the wished-for-discovery, managed the case of his patient so well that success crowned his effort, while he, despite every endeavor, was unable to extricate himself from the pit into which he had unwittingly fallen and was obliged to seek aid for his relief. The moral of this story is obvious. Experimenting on one's self with morphia, especially hypodermically, is dangerous, and if any of our readers are thus tampering with the drug, the best advice we can offer is, *quit*. It may be of interest to note, in closing, that Dr. B—— made a very gratifying recovery, leaving for home at the expiration of seventeen days; had circumstances demanded he could have done so a week earlier, and later tidings reported him doing well."

The Causes of Malaria.—Signor Torelli, who has recently published a map illustrating the prevalence of malaria in Italy, holds that the two principal causes of malaria are the spread of railways and the destruction of forests. Railway embankments interfere with natural drainage, and the destruction of forests causes long periods of drought, during which the earth becomes dry and porous as a sponge, so that when the rain does fall, instead of running off from the surface it is absorbed by the soil, which thereupon remains moist and gives forth noxious vapors for a long period.

Inversion of the Uterus.—Dr. O. J. Hutchins, of Depeyster, N. Y., reports a case of complete inversion of the uterus, with entire protrusion of the organ from the body. The patient was a lady aged thirty-one, primipara, of delicate and anæmic habits, who, after an easy labor, was delivered of a healthy child. Slight traction was then made upon the cord, after which the forefinger was passed into the vagina, and the placenta, which was within easy reach, carefully removed. Immediately following came a hard mass, the presence of which caused a violent expulsive effort on the part of the patient, when the entire uterus, completely inverted, was protruded from the vagina, accompanied by profuse hemorrhage. By gentle but firm pressure the organ was successfully returned within the vagina, but not entirely to its normal position. The patient, however, became suddenly pulseless, with short and labored respirations, and, in spite of free stimulation, the case proved fatal in about one hour and a half. No force was employed or anything given to expedite the labor beyond the administration of a drachm of fluid ergot one hour before the delivery of the child.

Treatment of Diphtheria.—Dr. J. J. O'Dea, of Stapleton, N. Y., recommends the following and, as he claims, successful local treatment of diphtheria: To the entire inflamed surface surrounding the false membrane, and close up to its border, he applies, by means of a cotton-wad, the following solution:

℞. Argenti nitrat. cryst. ..... ʒ j.
Spt. æther. nit. dulc. ..... iv.
Aquæ destill. ..... ʒ iv. M.

In the same manner he then makes an application of the following mixture to the surface of the false membrane, and out to its extreme edge, but no farther:

℞. Acid. carbol. ..... gr. viij.
Liq. ferri subsulph. ..... ʒ ijss.
Acid. sulphurosi. ..... ʒ iijss.
Glycerinæ. ..... ℥ j.
M.

These are to be repeated twice, or possibly three times, in twenty-four hours, the second mixture to be supplemented by a gargle of lime-water, thus allaying irritation and removing the *débris* of false membrane broken down by the action of the acid. When nothing remains of the deposit save some milky white patches he omits the applications and employs only the lime-water gargle or spray.

The Significance of Peptone in the Blood or Urine.—Jaksch, from a long series of examinations, concludes that if one finds peptone in the blood, it can be inferred that there is a depot where leucocytes are forming in excess somewhere. The peptone is naturally taken up by the white corpuscles which give it up under certain conditions, when it is excreted by the urine. Peptonuria indicates that resolution has begun in pneumonia. Peptone appears in the urine before physical signs of resolution appear in the lungs.

A New Method of Amputation of the Upper Extremity.—M. Desprès has devised (*British Medical Journal*) a new method of amputating the upper extremity. It is practicable in patients under twenty-eight years of age, is indicated in cancer of the scapular, and is less formidable than removal of the scapula. It may also be applied in white swelling of the shoulder involving the scapula. The method of operating was as follows: 1. He tied the subclavian artery, external to the scalenus muscle, by a double ligature, to avoid secondary hemorrhage. 2. He made an incision *en raquette*, commencing at the centre of the space separating the eminence of the spine of the vertebræ, at the internal border of the scapula, and at a level with its spine, and following its dorsum, turning round the salient portion of the shoulder and passing under the axilla as far as its centre, and afterward rejoining the original incision at its starting-point. 3. He dissected a superior flap without interfering with the incision for the ligature of the vessel. 4. He divided the clavicle as near as possible to its middle. 5. He tied the axillary vein. 6. The scapula was detached after division of the pectoralis minor and latissimus dorsi, and then dividing the muscles inserted into the scapula. The suprascapular artery should be tied, if necessary, and the wound brought together by sutures. The dangers of this operation consist in 1, the loss of venous blood; 2, the possibility of the entrance of air into the axillary vein; but they are not necessarily mortal. One complication occurred: the extremity of the clavicle perforated the skin; but M. Desprès thinks that it is better to have such a condition than to remove the entire collar-bone, and that this portion of the clavicle preserved covers in the superior aspect of the thorax.

Original Communications.

CASES OF DIABETES WITH URINE OF LOW SPECIFIC GRAVITY.

By S. WATERMAN, M.D.,
NEW YORK.

The following cases of transitory diabetes with urine of exceedingly low specific gravity (1.002), and in which Trommer's test gave promptly the reaction peculiar to the presence of sugar, ending both in recovery, are worthy of record.

Mrs. C.——, of German birth, married, aged twenty-seven, of nervo-sanguineous temperament, had advanced in her second pregnancy, to the eighth month of gestation. On Friday evening February 4, 1870, she was seized with a sudden chill, which lasted about half an hour, accompanied with a sense of excessive exhaustion and sinking in the præcardia. I saw her within half an hour of the attack, when the following symptoms presented themselves: She was exceedingly restless, throwing herself from one position to another, giving herself up to fear and despair. The surface of her body was cool; her temperature 96⅕° in the rectum, pulse ranging from 72 to 74 per minute, but threadlike and empty, heart's action very weak but not intermittent. Her lips were parched and covered with black sordes as if she had been in the latter stages of typhus gravior. She complained of unquenchable thirst, although she drank water continually. Her appearance was expressive of great suffering, and danger of dissolution seemed to be imminent. Her eyes seemed sunken and had a peculiar wild and glassy appearance. The color of her face was very pale. She had urgent calls to urinate every five or ten minutes, and always passed considerable quantities of a perfectly colorless urine. At every call to urinate she was seized with chills and violent shivering. She refused to lie down quietly, preferring to sit up and to shift unceasingly, in consequence of a sense of suffocation which was distressing in the extreme. She wrung her hands or threw them up wildly into the air, her vision was impaired, and she was continually asking for light. The sense of impending suffocation could be traced to a spasmodic constriction of the glottis. Strongly impressed with the belief that she would die, she desired to take leave of her children and relatives.

I learned that she was perfectly well that day until after a hearty supper. For many weeks previously she had suffered from nausea and loathing of food. I made a careful vaginal examination, but could not discover any abnormal condition. I found a head presentation in the first position. There was no undue distention of the abdomen, nor could I detect any tenderness, nor any other abnormal condition of the abdominal organs.

I came to the conclusion that the whole train of these strange and formidable symptoms, so rapidly developed without any premonitory trouble, was probably hysterical in its character; yet I had never seen an attack so peculiar and so terrible. She appeared like a person under the bewildering influence of some powerful narcotic. I ordered the following nervine:

℞. Tr. valerian. ether. ..... ℥j.
Tr. castor. vera ..... ℥ij.
Acid. phosph. dilut. ..... ℥j.

Misc. D. S.—A teaspoonful every half hour and brandy *pro re nata*.

Under the influence of this simple medication the symptoms gradually subsided and she fell into a quiet and refreshing sleep. I found her next morning up and attending to her household duties, complaining of weakness, but of nothing else, and she made a complete and speedy recovery. I had obtained a fair quantity of her urine, passed during the hysterical storm; another quantity of the morning urine was also secured and at once submitted to analysis, with the following results:

Night Urine.	*Morning Urine.*
Specific gravity, 1.002.	Specific gravity, 1.018.
Reaction, alkaline.	Reaction, acid.
Albumen, none.	Albumen, none.
Sugar (by Trommer's test), large quantity.	Sugar (by Trommer's test), small.
Color, white and clear.	Color, straw color.
Urea, scarcely a trace.	Urea, normal.

The night urine, which gave the instantaneous and intense sugar reaction, was allowed to stand a few days. Fermentation took place rapidly, reaction became decidedly acid, and its clearness and transparency changed into a turbid, milky fluid.

What caused this peculiar and strange transmutation? The microscope revealed the presence of fatty matters in exceedingly fine division, which could be dissolved with sulphuric ether. There were no casts. It is generally considered by good authorities (Golding-Bird, Ultzman, Dickinson, Beale, and others), that the presence of oil in the urine does not necessarily point to a pathological condition of the renal gland. It is not unfrequently met with in the urine of pregnant women. Says Dickinson ("On the Pathology and Treatment of Albuminuria"): "The presence of oil in the renal cells, even to a large amount, does not necessarily interfere with the action of the gland." It is foreign to the scope of this paper to enter into a full investigation of the origin and pathological significance of the presence of oil in the urine. Those interested in this peculiar condition of urine may find a full and minute description in the "Guy's Hospital Reports" for 1840, and also in the *Medico-Chirurgical Review* of 1839, p. 228, and *Journal de Chemie-Médicale*, 1839. Later references are furnished by Dr. Ultzman in the "Real Encyclopœdia der gesammten Heilkunde."

To this urine, or more directly speaking, to this fatty substance the name of kiestein was formerly given, and it was supposed to be a sure sign of pregnancy, and to be found invariably in the human female during uterine gestation. This notion is now pretty well exploded, as the same urine has been found in unimpregnated females, and in males also.

With regard to the appearance of fat-globules in the urine in question, after it had undergone the process of fermentation, a rational explanation, I think, can be given. The urine contained probably these oil-globules at the time it was passed. It will be remembered the urine was then strongly alkaline, and this alkalinity kept the oil in a saponified condition. The rapid fermentation was undoubtedly due to the conversion of its sugar into carbonic acid and alcohol. As soon as the alkalinity of the urine was neutralized by the nascent carbonic acid, the fatty substance, no longer saponified by the alkali, was precipitated, giving the urine its milky appearance.

A second case was in Mrs. H——, living in a shanty, corner of Sixth Avenue and Fifty-sixth

Street. She applied to me in February, 1868. My records show her to be forty-five years of age, of plump and muscular appearance, inclined to obesity. Menses ceased ten months previously. She supposed herself pregnant, and thought I could tell by examining her urine. The urine looked perfectly colorless, like water, had no perceptible odor, gave an alkaline reaction, and had a specific gravity of 1.002 at a temperature of 62° F. On the application of Trommer's test as modified by Pavy, an immediate and brilliant reaction took place, evidencing the presence of sugar. The microscope showed branch-like crystals, partaking of the character of urea, and of chlorate of ammonia, but no casts. On slow evaporation a resinous matter remained, hardening in the air, of yellow wax color, insoluble in ether and chloroform, but soluble in caustic potassa, which, with Fehling's solution gave the characteristic precipitate of suboxide of copper. A part of the urine left to spontaneous evaporation presented beautiful octahedra crystals of oxide of lime, and splendid large crystals of salts of urea, which when placed under the polariscope presented the most beautiful sight imaginable.

Subsequent observation proved that Mrs. H—— had not been pregnant. Under proper treatment the anomalous secretion disappeared and left her a perfectly healthy person.

The presence of sugar in the urine is associated in our minds with a high specific gravity of the secretion, and such, I think, is true, almost invariably in diabetic urine. When the urinometer indicates such high specific gravity we are induced to test for sugar, but in urine below the usual specific weight of 1.012 to 1.015, the presence of sugar is not suspected, and the sugar test is seldom, if ever, applied, except by accident. Whether sugar is a normal ingredient of every urine is yet an open question, and has no direct reference to the points under consideration. I have vainly searched for cases similar to these presented by me, and for an explanation of its phenomena. Only Roberts (urinary and renal disease) speaks of it. He says: "If its density persists at a lower point 1.005, to 1.008, the existence of insipid diabetes is to be apprehended. After hysterical paroxysms in women, after similar attacks in men, and sometimes in the apoplectic state, the urine is discharged in large quantity and of exceedingly low density."

Dr. A. Jacobi of this city has a case now on hand, where at a density of urine at 1.007 sugar is present.

In connection with this point of inquiry it is well to remember that various substances, such as carbonate of ammonia (derived from the decomposition of urea) as well as other salts of ammonia, carbonate of lime, phosphate of lime, phosphate of magnesia, and some other substances interfere with the usual sugar test. This I found to be the case not unfrequently when the quantity of sugar was small. Its presence was demonstrated by Trommer's test after the lapse of many days, the urine with the test solution having been set aside for that purpose; it took sometimes eight days before the suboxide of copper was precipitated.

In the two cases above related Trommer's test gave an immediate reaction. How the small percentage above the specific gravity of water, two per cent., could account for the presence of sugar I am unable to surmise. May not Trommer's test, after all, respond to other substances as well as to sugar, and may we not often be led into errors by its reaction? We know it responds to indican. So says Thudicum ("Pathology of Urine"). Indican is, however, not a sugar, and as found in the urine, is a gum-like substance, from which alcohol separates a resinous mass, of a lower specific gravity than water, and which, when acted upon by the oxide of copper with an excess of caustic soda assumes a greenish color, and finally throws down the suboxide of copper.

Alonzo Rognosi made a communication to the Academy of Sciences, December, 1851, stating that he found sugar in the urine of hysterical persons; and in the "Reports of the G. A. University of the Royal Society of Sciences at Gottingen," dated March 15, 1852, Dr. R. Wagner speaks of the presence of sugar in the urine of hysterical persons as a proven and incontestable fact.

A CASE OF
FRACTURE OF TIBIA AND FIBULA;
With Aneurism of Posterior Tibial Artery.

By L. E. BORCHEIM, M.D.,

CLIFTON, ARIZONA.

LATE HOUSE PHYSICIAN TO THE MOUNT SINAI HOSPITAL, NEW YORK.

On August 6th, I was called to attend a patient giving the following history: M. C——, Mexican, aged forty-five, miner by occupation. While standing upon an empty box, in an intoxicated condition, the box was kicked from under him and he was violently precipitated to the ground, and in falling struck his right leg upon a rock. In endeavoring to arise found himself unable to do so, as his leg gave away under him.

My first visit to the patient was made twenty-four hours after the accident, and I found a transverse fracture of the tibia at the junction of the lower with the middle third, also fracture of the fibula (oblique) at its middle third. There was but slight ecchymosis, but considerable œdema and pain. I placed the limb in an improvised fracture-box and ordered an evaporating lotion of ammon. chloride and alcohol, with the intention of reducing the swelling previous to the application of a plaster bandage.

When on the 16th I went to see the patient to apply the permanent dressing, I found him suffering with severe pain in the limb, and upon examination, detected a small mass having a distinct pulsation, which ceased upon applying pressure upon the popliteal artery.

The diagnosis of an aneurism of the posterior tibial artery was accordingly made, and a pad applied by a bandage over the popliteal artery; this, however, gave rise to considerable inconvenience, and the pad was accordingly applied to the superficial femoral artery.

After having persevered in this treatment, at intervals, for three days, and without any success, I finally ligated the superficial femoral at the apex of Scarpa's triangle in the usual manner, and the result gave complete satisfaction.

The process of repair in the fractured bones was apparently not interfered with, and the patient left here a few days ago, still wearing his "Bavarian splint."

I desire to publish the above, owing to the rare occurrence of this complication, myself being able to find but two recorded cases.

CONCERNING THE EFFECTS OF THE WEED UPON HABITUAL SMOKERS.[1]

By W. H. BENNETT, M.D.,

BROOKLYN, N. Y.

A GREAT deal has been said upon this subject, and very frequently by men who know nothing of the effect of tobacco-smoke from personal experience. Some stimulated only by a desire to check, if possible, the spread of an often pernicious habit, have allowed their enthusiasm in the course of philanthropy to exaggerate and misstate facts; while others have committed the greater error of basing their conclusions upon the *supposed* effects of habitual smoking, without having investigated the subject, and without knowing anything about the matter. Many careful observations have been made, but chiefly with large doses, and we know perfectly well the physiological effects of tobacco, when given for experiment for a short time, and also its therapeutical action when given as a medicine in acute disease; but regarding its effects, when used habitually for an indefinite period as a luxury, in comparatively small doses, in the form of smoke, we have but little trustworthy data; and, undoubtedly, in regard to this method of using the weed, something may be said in its favor as well as against it.

However truthful and careful a person may desire to be, it is very possible for him to commit error, and for this very reason repeated experiment is necessary, to demonstrate beyond peradventure any question pertaining to medical science. It is very frequently said that one can tell nothing of the effects of a drug by experimenting on one's self, for the mind will be biassed to a certain extent by preconceived ideas, rendering the results untrustworthy; and, moreover, the action of the material used will so stimulate or depress the mental functions as to materially interfere with one's reasoning correctly. But this argument certainly does not apply in the case of tobacco, where it is taken as a luxury day after day for a number of years. In this case, it certainly does not interfere with our powers of perception to a sufficient degree to render our observations untrustworthy in the least.

From repeated experiments, I am led to believe that a difference of opinion in regard to the effects of tobacco-smoking, where the observations are carefully conducted, and are confined to persons habitually using the weed, will only occur where the quantities daily consumed vary. Of course, the susceptibility of the person to the influence of a sedative must always be taken into consideration, and the quantity taken must be viewed in connection with this; thus, a single cigar or pipe of tobacco may often produce in the weakly an effect equal to four or five times the quantity in a strong, robust person.

Tobacco, if taken in small doses by those accustomed to its use, stimulates mental activity, and prevents drowsiness; it increases the flow of ideas, increases the clearness of mental perceptions, soothes, but does not exhilarate, and this latter effect is most marked when there is mental depression or anxiety. It always causes slight muscular debility, and diminished excitability of the motor nerves, but sensation is not in any way affected. Its effect on the heart is to cause fewer and less energetic contractions. It does not, therefore, prevent fatigue, but owing to its soothing action, the effect of over-work or great exertion is much less severely felt, when followed immediately by a moderate indulgence in the pipe or cigar. More work, both mental and physical, can be performed if small rations of tobacco are allowed than if it be withheld. But if large doses are taken there is continued depression, and if indulged in to excess for any length of time there results a condition similar in many respects to that caused by the abuse of alcohol, although it is not developed to the extreme extent as when the latter drug is used. The mucous membrane of the mouth, pharynx, and posterior nares is seriously affected, and I am sure I have seen unmanageable and destructive ulceration of the soft parts of the mouth, from the smoking of rank tobacco, in short pipes, by old persons. Where a good quality of tobacco is used, or cigars, a chronic catarrh of the parts mentioned is the result. There is disordered digestion, loss of appetite, restlessness, insomnia, and weakness of body and mind, with also, very frequently, disturbance of vision and impaired memory.

Tobacco, in the form of smoke, in small doses excites a free flow of saliva for some time, which is not followed afterward by a diminished flow below the normal amount. It stimulates digestion, and increases the appetite, and if the good effects only are desired, it should be indulged in always after meals. In all doses short of acute intoxication it increases the secretion of urine,[1] and stimulates the peristaltic action of the bowels; but exactly how it produces the latter result cannot be explained. It is equally true that it increases the sexual desire; its action in this respect may be due partly to its influence on the nervé centres and partly to the irritation produced in the urinary tract through which the resulting products are eliminated from the economy.

Smoking, even in moderation is injurious to the teeth, and its effect upon these organs is worse in a cold almosphere than in a warm one, and is bad according to the existing condition of the teeth, and the condition in which they are allowed to remain. A tooth expands and contracts like most other hard substances under variations of temperature, and if these expansions and contractions take place too rapidly, or to too great an extent, the expansive properties of the whole organ not being equal, the external covering being the harder, and more susceptible to change as well as being most exposed to it, cracks, and thus is produced a vulnerable point for the secretions of the mouth to act upon. That the secretions of the mouth are rendered acid by the action of tobacco smoke may be demonstrated by the use of litmus paper within half an hour after using the weed; and it may here be mentioned that the fluids secreted by the mucous membrane of the buccal cavity of any habitual smoker, who uses tobacco freely, are apt constantly to give an acid reaction.[2] This acid secretion facilitates the deposit of earthy matter upon the teeth, as well as exerts a chemical action at previously weakened points; and it keeps the soft part covering the

[1] I have recently read some remarks in the London Lancet upon this subject, but find there no reasons given for the conclusions stated.

[1] This, I know, is contrary to the expressed opinion of several eminent experimenters, but is nevertheless, I am certain, correct.

[2] The saliva is undoubtedly secreted alkaline, but the other secretions, from the mucous gland and follicles, are sufficiently acid to more than neutralize this, and it undergoes change in the mouth. If the inside of the lip or cheek of an inveterate smoker be wiped dry, the first watery exhalation, or more properly, fluid exudation, even though the quantity be so small as to be imperceptible, will redden litmus paper when pressed upon the part.

roots in an irritable condition—the result of the existing catarrh.

The injurious effect of the abuse of tobacco-smoke on the mucous membranes with which it comes in contact is one of its worst features. It produces a chronic catarrh which, under no other source of irritation, gets gradually worse and worse, and in time renders the smoker very uncomfortable. In warm climates where the extremes of temperature are slight, chronic catarrh of the mouth and pharynx is very common among smokers, and as it is customary to exhale the smoke through the nares, a diseased condition of the nasal mucous membrane is also very frequently met with. But in our own climate, where the extremes of heat and cold are great and aggravated, forms of chronic catarrh, so common from other causes, the irritation of tobacco-smoke when allowed to exceed certain limits is of still more serious import, and often is the greatest obstacle to successful treatment. It is hard work to get smokers to believe this; they will tell you that a cigar in the morning relieves their catarrh and makes them more comfortable, and no doubt it does for the time being. What is more natural than that a swollen and infiltrated membrane in a state of passive congestion and covered with a thick or sticky secretion, should be relieved by gentle stimulation, which quickens the circulation and thus diminishes the swelling, and clears off the adherent mucus. If when this is accomplished the irritation should cease there would be more good than harm done, were it not that tobacco-smoke renders the retained secretion of all parts with which it comes in contact more acrid. But if the act of smoking be repeated many times during the day, gentle stimulation is merged into continuous irritation, which no one can fail to see is injurious. Smoking probably is injurious to the buccal and pharyngeal membranes, aside from its irritant effect, for the suction required to draw the smoke into the mouth rarefies the air in this and the adjacent cavities, which, if repeated and continued indefinitely, tends to cause dilatation of the capillaries and give rise to continued passive congestion.

The mucous membrane of the stomach does not escape the baneful influence of excessive and frequent indulgence in tobacco. Probably some of the smoke is swallowed as such, and besides a portion of the oil which is deposited in the mouth is carried down by the saliva. The result is similar to that produced upon other mucous membranes.

The sight unquestionably suffers in cases of excessive indulgence, irrespective of its deleterious effect on the general economy. Although the action of tobacco is by no means so marked on the pupil as that of belladonna, hyoscyamus, or stramonium, in inveterate smokers the pupils are at all times apt to be somewhat dilated, and they do not contract to what would under such circumstances be considered their normal size when exposed to a bright light. In consequence of this the retinæ are exposed to undue irritation. But probably a more important factor in generating disease of the organ of vision is the frequent contact of smoke with the exposed conjunctivæ, which not only produces changes in their circulation and nutrition, but in the circulation and nutrition also of the delicate parts lying in close proximity underneath. To studious men—those who sit bent over their book or desk with a cigar in their mouth, does this latter remark particularly apply. The injurious effects of immoderate smoking on the eyesight are slowly produced, and very frequently, if the habit date from no very distant period, they vanish at once upon its being discontinued; but certain it is that excessive smokers do not possess normal vision. It is not necessary to go into the question of atrophy of the optic nerve, as this ground has been travelled over repeatedly by Mackenzie, Wells, Von Graef, and many others. There can be no doubt that excessive smoking, like excessive drinking, if indulged in to the extent of introducing large quantities of an active poison into the economy, may exert a depressing influence upon, and when long continued cause organic change in such a very sensitive structure.

Excessive smoking relaxes the muscular tissues throughout the entire body, and induces debility. Weakness in the knees is a common complaint of all great smokers, though enjoying the best of health. The spinal cord seems to be feebly impressed; true reflex irritability independent of consciousness is diminished, while there is tremor on exertion and clumsiness in performing simple operations, also indicating impairment of function. On certain functions of the brain excessive indulgence has a depressing influence which is peculiar, while at the same time there is a certain amount of cerebral irritation. Voluntary movements are produced less readily, for the motor nerves are slightly paralyzed; but the nerves of special sensation more readily convey impressions than before, and there may be frequent movement independent and in defiance of volition, instinctive as it were—sensori-motor reflex. Thus a slight noise like the sound of a distant whistle will cause a sudden start or movement of the hand toward the ear that would require an effort to accomplish voluntarily, but which cannot be prevented. Regarding this increased excitation of the nerves of special sense and the sensory nerves, we may look upon it as unnatural and perverted; for take the sense of vision while the retina is unduly sensitive to light, and a sudden glare will cause a start. Normal vision is very commonly not present, and even bright objects cannot be clearly and sharply defined. Although acuteness of perception does not seem to be materially interfered with, and external impressions are readily received, they are not retained, but discarded without due consideration or further mental exertion; the impressions are transitory, and new ideas crowd in to take their place. The function of ideation is active, but the mind is wearied, as it were, and will not use or develop the ideas conceived.

Smoking in moderation gives us all the good effects of tobacco, and not only without being productive of any harm, if we except its action on the teeth, but in many cases with actual benefit to the person using it. Thus it soothes us when in pain and modifies the exhaustion of fatigue. But all are not affected alike, and the dose must be regulated according to the natural susceptibility of the smoker. One's calling in life has much to do with whether he may use tobacco or not, and it also dictates in a great measure in what dose he may take it. The man of sedentary habits, and he who must use his eyes much, or weary his brain with difficult problems or deep and serious thought, or use his hands in careful and exceedingly nice manipulations, and the man who has much to irritate him, if he smoke with benefit must smoke in great moderation. But the active man who takes plenty of bodily exercise, the wit, the person whose avocation simply requires that he use his brain to act or respond on the spur of the moment without having to follow

out the idea to any great length, may indulge more freely.

The effect of tobacco-smoke in causing a deposit on the teeth may be obviated by brushing these organs, both before and after the use of the cigar or pipe, and rinsing out the mouth with a weak solution of soda; and, as a matter of fact, it would be well enough for most persons to do this after eating, whether they are smokers or not.

As a medicine in certain forms of disease, when the dose can be regulated, tobacco is of great value, and in particular cases is superior to belladonna, for those habituated to its use like to take it and do not look upon it as a medicine. Its effects on the mind are experienced at once, and are continued after the depressing action on the muscular system has passed off. The diseases in which it is of value readily suggest themselves when we have made ourselves acquainted with the properties of the drug, but I would call particular attention to the following, *i. e.*, cardiac hypertrophy, when the organ acts too forcibly, habitual constipation, certain cases of asthma, and certain forms of dyspepsia, where the food lies like a load in the stomach after eating. In diseases of the mind, notably melancholia, it is of inestimable value, when its administration is properly understood. Here, by causing a flow of ideas, it dispels for the time the habitual fixed sorrow and relieves the mental strain by turning the thoughts into various channels without any apparent exertion on the part of the patient. And theoretically we might suppose (paradoxical as it may at first seem) that even in acute mania it will tend to prevent the ravings by varying the impressions and giving rise to pleasurable thoughts.

The propriety of withdrawing the accustomed ration of tobacco from persons long habituated to its use is questionable. It is like withholding the seasoning from their food, under which circumstances, no matter how nutritious the diet, it fails to please the palate, and does not receive the attention from the stomach it otherwise would, but lies like a load to disgust the digestive tract, which seems to await the coming of something to direct the commencement of operations.

In all forms of chronic catarrh smoking is bad, even in catarrh of the bladder. In suppurative disease of the middle ear it is especially injurious. In insomnia from mental strain and worry, in cases of debilitated heart, and in certain forms of neuralgia occurring in the weakly, tobacco had best be dispersed with.

The man who expectorates much, and the one who chews the end of his cigar and swallows the spittle will both suffer more or less from dyspepsia.

A New Theory of Acute Yellow Atrophy.—Dr. J. Hlava, of Prague, in a series of articles in the *Prager Medicin. Wochenschrift*, upon acute yellow atrophy of the liver, announces the following conclusions: 1. Acute yellow atrophy begins with an increase in the size of the liver. 2. The process is of a purely degenerative nature. 3. The disease is an infectious one. Hlava found in his two cases small round and rod-shaped organisms, which filled the biliary ducts throughout the organ. They resembled the bacillus gastricus of Klebs.

A Goat Farm has recently been established in England for the purpose of supplying goat's milk to London infants and invalids.

FOREIGN BODY IN THE AIR-PASSAGES.

A Bean Impacted in the Right Bronchus—Tracheotomy—Its Removal—Recovery.

By NATHAN JACOBSON, M.D.,
Syracuse, N. Y.

On the morning of July 6th, at half-past ten, the little child of F—— J——, of East Syracuse, was seen creeping toward a bean lying upon the floor, and immediately thereafter was choking. The mother picked up the child and introduced her finger into its throat. The child vomited, but was not relieved. The father held it up by its heels and slapped it upon the back, but the dyspnœa continued. A neighbor placed the child upon its stomach and passed her finger into its throat, in the meantime pouring water upon the infant's head, and soon the severe and distressing symptoms of breathing were relieved. However, the child continued to breathe with difficulty, "wheezing and rattling."

Dr. E. C. Skinner, of East Syracuse, was called, and resorted to all minor measures for the child's relief, but without material benefit.

At 5 P.M. the child had another severe paroxysm of dyspnœa, and during the night, according to the parents' story, the attacks returned every fifteen minutes. Its condition was not particularly changed during the succeeding day, and about noon of the 8th I was called to see it.

I found a child sixteen months old, fairly well nourished, without fever, face pale, lips slightly purple. Excepting that the respiration was hurried, there was at the moment of examination no apparent interference with breathing. When the child cried it was hoarse.

With the laryngoscope the larynx was seen to be congested, the cords reddened; otherwise nothing abnormal was noticeable. The child struggled so, that, in order to satisfactorily make this examination, it was chloroformed.

Upon physical examination of the chest it was found that the right lung was collapsed, and was receiving no air whatever into any part. The diagnosis of a foreign body impacted in the right bronchus was therefore easily made.

There were no symptoms indicating immediate danger, but the prospects were that with the continued presence of the foreign body in the bronchus, the condition of the lung, at best, would not be improved, and should possibly the foreign body in a fit of coughing be dislodged, suffocation was to be feared. Tracheotomy was recommended, and, with the consent of the parents, performed.

The child was chloroformed. In performing the operation I proceeded very carefully, dissecting the tissues, pushing aside the veins where possible, and not puncturing the trachea until all hemorrhage had ceased. The tracheal incision was made one-half inch in length, and was kept open with a two-bladed dilator by Dr. Skinner.

Forceps of different shapes were in turn cautiously introduced, but all efforts to seize the foreign body failed until I used the tracheal forceps devised by Stoerk and made by Reiner, of Vienna. With these I succeeded in entering the bronchus, and, after a little perseverance, grasped a bit of the skin of the bean. Another effort brought out another piece of the skin, while with the third attempt I grasped one half, and with the fourth the remaining half of the foreign body.

The bean, somewhat swollen from the absorbed secretions, measured in circumference seven-eighths, in its longest diameter three-fourths, and in its transverse five-sixteenths of an inch.

The wound was closed with adhesive straps. A loosely knitted scarf was thrown around the child's neck. In the evening three grains of quinine were given. During the night the child had a convulsion. When seen, at noon of the following day the temperature was 103.5°, respiration 60, and pulse very rapid. The child breathed largely through the tracheal opening, the adhesive straps having given way. A dry hacking cough was present. It was very restless and had slept none since the operation, except at rare intervals, and then only for a few moments. Tr. opii. camphorat. was given to secure rest.

During the succeeding day the fever increased rather than diminished, despite the use of quinine and sponging with cold water, and in the evening had reached 104.2°. The remaining symptoms were also unchanged. The percussion note was clear over both lungs; auscultation was of little avail, because of the loud tracheal breathing.

With the third day after operation the fever began to decrease, the other unfavorable symptoms to abate. July 13th, five days after operation, there was complete defervescence. In five days more the external wound had completely closed.

The child remained somewhat hoarse for about three weeks after operation, but aside from this there was nothing unfavorable in its case. On November 21st, the mother assured me that the child had had no further annoyance from this source and had made a perfect recovery.

REMARKS ON INTESTINAL OBSTRUCTION.

By H. ILLOWAY, M.D.,

CINCINNATI, O.

Case I.—In December, 1878, I was requested by my friend Dr. Keck, to see with him a case of intestinal obstruction. A boy, aged fourteen, of German parentage, was the patient. He was of flabby habit, rather dull, neither working nor studying, living on cakes, coffee and slops, and not much given to substantial food. The doctor had been called two days before and learned a history of what he supposed, at the time, ordinary constipation. He ordered him a laxative. This did not act. He then directed pills containing extr. colocynth co., grs. xii., and calomel, grs. xxiv. He took all and still no action. He was then ordered *six drops* of croton oil in pills. This proved no more effectual than the other remedies.

I examined the abdomen carefully, and found about the region of the umbilicus an elevation which was rather sore on pressure. The boy also complained of pains shooting out from this spot. My diagnosis was intussusception.

I had at one time noticed in the office of the late Dr. Holdt, a syringe constructed like a pump, and throwing a continuous stream with considerable force. I advised against any further medication and suggested to my colleague that I would procure the above-mentioned instrument, when we would proceed with enemata. We returned in the evening, Dr. Holdt, kindly loaning me his instrument. I threw into the bowels a tin basin nearly full of cold water, in fact, so much that the patient cried he could no longer bear it. He got upon the vessel and the water passed from him very much colored with fecal matter. Five minutes thereafter we gave him another injection, again until he cried he could not hold any longer. This time he had a large fecal evacuation—very fluid, of course, from the large quantity of water injected. We now ordered him quinia in one-grain doses, with tinct. nuc. vom., and left him. In the morning we found him much improved, his bowels had moved several times during the night, and once in the morning. In three days more he was up and about.

Case II.—Mr. F——, aged seventy, an old gentleman, hale and hearty, very active, and a good eater. Much subject to flatulent colic. I had treated him at various times for these attacks, and always succeeded in relieving him by a hypodermic injection of morphia ℥x. to xv. Magendie's solution; nothing further being required. He stated that when these attacks came on, it seemed to him as if something had knotted in the right hypochondriac region.

In the winter of 1880, I was called to see the old gentleman, who was again complaining of an attack of colic. I gave him a hypodermic injection of morphia. Next morning early, I was summoned to him again, and found that he was still suffering severely. I ordered him a pill of opium, half a grain, and extr. hyoscyam. half a grain, to be taken every two or three hours, as the severity of the pain might demand. This was continued for two days. He now had difficulty in micturition, passing but little urine and that with much pain. The pain in the bowels still very severe. Vomiting of biliary matter has set in. Dr. Forchheimer was called in consultation. He examined the case, and we agreed upon a purgative in the shape of calomel and jalap. This was 2 A.M. In the morning I visited my patient, and found his condition very bad. Countenance anxious and expressive of great agony. Continued vomiting of biliary matter. Small feeble pulse. He had summoned his children in the expectation of his speedy dissolution. The powders were vomited almost as soon as swallowed. His wife, upon her own responsibility, had administered to him during the night about twelve injections, both from a fountain and Davidson syringe. None of these injections, she assured me had passed from him. I had brought with me (by the kindness of Dr. Holdt) the same syringe that had previously proved so effectual. Fearing to add to the shock, I determined to use hot water in this case. I accordingly had a large china wash-bowl full of hot water brought in, cooled it to the temperature of 106° F. (by the thermometer), and then proceeded to pump him full, until he cried he could hold no more, rubbing himself about the umbilicus, saying he felt the water go all through him. He got up on the vessel, when the injection passed off with a large discharge of gas. Five minutes thereafter I gave him another injection, about the same quantity as before; this time, however, the temperature of the water at 90° F. This was very soon discharged with some fecal matter, and considerable quantity of flatus.

He now felt much better. The pain was very much relieved, and the vomiting arrested. I then waited fifteen minutes and gave him another injection, water at 106° F. This soon passed away with considerable fecal matter and gas. Pain completely relieved. I now left him, directing him to take some beef broth and brandy alternately at intervals. Returned in the evening, and found him doing very well; has had two more evacuations since morning; passed urine freely; taken the beef broth and

brandy with great relish. Completely relieved of pain. There is considerable soreness over the abdomen, more so in the right hypochondrium. He feels very much prostrated. He was now ordered a tonic; kept on light nutritious food, and in a week was on his feet again attending to his duties as usual.

The medical treatment of intestinal obstruction deserves most careful consideration.

The administration of the strong purgatives[1] in this affection is a method of treatment certainly most reprehensible. The use of these remedies directly jeopardizes the life of the patient.

The causes of obstruction are numerous, from a simple impaction of fæces, from a gall-stone lodged in the duodenum, to the more dangerous conditions of volvulus and intussusception.

A correct diagnosis as to cause is, as all authorities agree,[2] in many cases impossible. Hartshorne[3] expresses himself very strongly upon this point. "But at least a probable diagnosis is all that the nature of the case will admit. The differential discernment of special forms of obstruction during life is impossible." It behooves us, therefore, to be very guarded in our treatment, that a condition already bad be not rendered hopeless.

It must be borne in mind that even though we recognize the condition to be due to impaction of fæces, there may also exist a condition of ulceration[4] which violent peristalsis may rapidly convert into a perforation. I have a case in mind where a person who had suffered with constipation for a long time had a purgative prescribed by a physician of this city, and next day at noon was in a condition of collapse from perforation of the bowels.

If the condition be due to a gall-stone impacted in the duodenum, and these cases are by no means rare,[5] we may have a similar condition of ulceration, or rather partial perforation, that upon violent action may become complete.

If the obstruction be due to volvulus the administration of a drastic cathartic is certain not to relieve, and if we have to deal with an intussusception we certainly do not improve our patient's chances for recovery.

There is another point, and a most important one, which we must always bear in mind, when confronted by a case of obstruction, that is, the question of an early operation. At the present day, when the abdomen is opened with impunity, the question has certainly great pertinence. That most remarkable observer and clinical teacher, Trousseau, even in his day advocated an early operation. And here arises the consideration, what chances for success has such an operation where the patient has been dosed with camboge, croton oil, etc., and an existing condition giving rise to intense congestion and inflammation aggravated by such medication and most likely rendered fatal.

In many cases there supervenes a condition of paralysis of the muscular structures of the intestines from the long-continued pressure on the parts by hardened fecal matter, from the sudden distention of certain portions of the intestines by a large accumulation of gas, or from pathological changes inhibiting the action of the nervous centres. This condition cannot be overcome by the administration of a drastic cathartic. It happens not infrequently, therefore, that one or the other of this class of remedies, or several of them, are administered freely to patients and remain totally inert so far as any *evacuant* effects are concerned.[1]

Very often they excite a reversed peristalsis resulting in bilious vomiting, followed by stercoraceous and that whole train of evil symptoms accompanying this alarming condition.

Sir Thomas Watson thus forcibly expresses himself upon the use of those agents: "Withhold purgatives in those cases, because they are not merely useless, but positively hurtful; hurtful not only in the late, but in the early stage of the obstructive process; not merely condemned by an experience which is sometimes equivocal, but contraindicated by whatever rational principles can be deduced from the physiology and pathology of the malady."[2]

The treatment by opium is certainly more rational and more in accordance with our knowledge of the pathological conditions that may exist in this affection. But even to this plan of treatment there are some objections—more particularly to its employment at the onset of the disease.

First.—A case treated with opium becomes necessarily a protracted one.

Second.—In the simpler case we have means that relieve the condition more rapidly and without incurring any greater risk.

Third.—That even opium in large doses cannot always alleviate the intense suffering of the patient. In explanation of this statement I would say that it has been my experience where there was great accumulation of gas, the pains excited thereby could not be relieved by opium; nothing but the expulsion of the flatus would answer.

Fourth.—It may so mask the conditions that the proper moment for resort to operative interference may pass unperceived.

But the chief objection to its employment at the outset refers more particularly to the dangerous conditions of volvulus and intussusception.

There can be no doubt that these forms of trouble occur more frequently than we have any knowledge of, but that nature by a powerful peristaltic effort rights them again. Trousseau[3] has very explicitly called attention to this point: "You can understand how intestinal occlusion may be the consequence of this invagination; it is not, however, an inevitable consequence, for a vigorous contraction of the intestines may suffice to re-establish the normal condition."

Though we certainly, as already stated above, have no right to, possibly cannot, call forth such contraction by the administration of irritating agents, it is certainly a question whether it is wise to prevent such contraction occurring by the administration of large doses of opium.

All authorities recommend enemata; not because any direct curative effects are expected therefrom, but rather upon the principle "to be doing something," and that that something, if it do no good, shall do no harm. "Enemata are often beneficial, partly by relieving the lower bowel, partly, perhaps,

---

[1] Such agents as colocynth extr., camboge, croton oil, etc., which are so frequently employed in this disease, remedies that produce irritation, violent, irregular peristalsis, congestion, and frequently lead to gastro-intestinal inflammation. Wood: Treat. on Ther. and Ph.; H. C. Wood: Ther. Pharm. and Toxic; Bartholow; Phillips.

[2] Reynolds' System of Medicine: article, Intest. Obstruction.

[3] Hartshorne's Essentials of the Practice of Medicine, 1861.

[4] Reynolds' System of Medicine, loc. cit.

[5] N. Y. MEDICAL RECORD, April 15, 1869: article by Prof. Sands.

[1] As in Case I. of this paper. See also in histories of cases recorded in N. Y. MEDICAL RECORD, loc. cit.

[2] Watson's Practice of Medicine.

[3] Trousseau: Clinical Lect., vol. ii., art., Int. Obstruction. Philadelphia, 1873.

by acting as a kind of local fomentation."[1] It is for this reason, I believe, that, though so unanimously recommended, enemata are so rarely employed in this affection, as can be readily seen by the published histories of this malady; physicians seemingly preferring remedies of more decisive character.

And still enemata are the best means for the treatment of this disease and can be made directly curative in their effects. Certainly, as ordinarily administered nothing more than the effects described in the paragraph just quoted can be expected. An enema to be curative in intestinal obstruction must possess force. It must be sufficiently powerful to break down a mass of hardened fæces. It must have force enough to pass the ileocæcal valve.[2] It must have force enough to excite quickly a normal peristaltic action of the bowels by a powerful stimulation of the paralyzed muscles or inhibited nerves of the intestines.

The syringe in common use for this purpose possesses no force; the water is thrown in in feeble spurts; and even with the monster clyster (which would answer to enemata from the fountain syringe) it is questionable, taking into consideration the capacity, length, and resistance of the rectum, whether much more force is exerted thereby.

The instrument which was used in the treatment is a force-pump supplied with a suction and delivery pipe, has a stroke of one and one-half inches, and is operated by a handle to which is attached the segment of a gear-wheel which mashes in a rack, said rack being part of the piston-rod. If desired it can be firmly attached to a bed or chair by a clamp. It throws a continuous stream.

Without going into further details, it will be evident to all what great force can be exercised with this instrument. This powerful effect will greatly be increased when supplemented by the energetic action of water at a temperature of 75°F. or 106° F. as may at the time seem best.

That with this instrument the stream can be forced beyond the Bauhinian valve is undoubted in my mind. When discussing this point with the late Dr. Holdt (the possessor of this instrument), a gentleman well known here as a thoroughly scientific physician, a man of great attainments and at one time professor in the Russo-German University of Dorpat, he stated to me that he had on various occasions succeeded in throwing the injection beyond the valve.

The powerful action of this instrument is well illustrated by the two cases here recorded.

In Case I., a case undoubtedly of intussusception, the most powerful cathartics in the materia medica had been administered without avail. There was undoubtedly a paralysis of the muscular structure, and this had to be overcome before any relief could be expected. The rapid manner in which relief was afforded and the case cured is already recounted above.

Case II. was in my opinion an invagination of the ileum into the colon. In this case the curative effect of this powerful enema was markedly illustrated. As already related, the patient's condition was very dangerous, and his wife, who is rather expert in such matters, sought to relieve him by the administration of numerous clysters, both with the bulb and fountain syringes, but without avail; perhaps adding to his misery. There was in this case a reversed peristalsis, and it is a question in my mind whether the fluid was not gradually carried upward and ejected by the mouth, a point which is corroborated by the fact that he vomited more that night, and by the statement of the wife that none of the injections had passed away by the rectum. With this powerful syringe, however, and the hot water, the normal peristaltic movement was at once reestablished, the invagination reduced, the flatus expelled; the pain, which seemed uncontrollable, relieved at once, and the patient, who was on the verge of death, redivivus—cured in fifteen minutes.

The immediate relief following in these cases, which can be substantiated by my colleague, Dr. K., in Case I., and in Case II. by the patient himself, who is still hale and hearty, is the best recommendation for the instrument and method here presented.

There is moreover this in its favor, where a cure by ordinary means is possible it will cure at once. Where it does not relieve the condition it will be a certain indication that surgical interference is necessary; and the success of the operation will be in no way prejudiced by the enemata, on the contrary, rather, the hot or cold water may perhaps have improved surrounding conditions.

[1] Reynolds' System of Medicine, loc. cit.

[2] Experimentally this has been done. See Niemayer, Handbuch der Speciel. Pathol. u. Therap., 9th edit. I am informed by my friend, Dr. A. Rothacker, Pathologist Cincinnati Hospital, that it has been done in the post mortem room of the hospital.

Progress of Medical Science.

Etiology of Hemorrhagic Small-Pox.—Dr. L. H. Petit concludes as follows: "The visceral changes found post-mortem in patients dead of hemorrhagic small-pox should be regarded as causes rather than as effects of the disease. It is well always to distinguish among these changes those which are old (various degenerations, sclerosis, etc.) and those which are recent (interstitial hemorrhages). These general lesions, whether the cause or the effect of a general morbid state of the organism, act upon small-pox, as upon traumatic affections, through modifications in the blood or in the tissues—especially in the capillaries. Among those predisposed to hemorrhagic small-pox may be classed former sufferers from diseases of the liver, spleen, heart, kidneys, and perhaps also the lungs, and of affections capable of producing visceral changes—rheumatism, scarlatina, malaria, alcoholism, pregnancy, etc. The therapeutical application of these etiological facts is as yet uncertain, but we may regard the prognosis as very grave when small-pox attacks one suffering from any of the above-mentioned affections; the disease is likely to assume the hemorrhagic or some other grave form."—*Le Progrès Médical*, No. 37, 1882.

The Importance of the Superficial Lymphatics.—In a paper read before the Académie de Médecine of Paris, Dr. Onimus calls attention to the part played by the superficial lymphatic network in the phenomenon of redness of the skin after irritation. The lymphatics lie superficial to the capillaries and contain a pale translucent yellow fluid. If this be abundant the red color of the blood-vessels beneath is hidden, and the skin becomes white. If it be scanty the color of the blood predominates, and the skin is more or less red. After an irritation of the skin the part becomes white, then red, and finally

rose-colored. At first both the lymphatics and the blood-vessels are mechanically emptied of their contents, and a white spot appears. The blood returns immediately to the capillaries, while the re-establishment of the lymphatic circulation is more tardy, and one can see after a while the little white lines running in every direction over the red surface until the whole presents a rose-colored hue. The edges of the reddened spot are often marked by a white elevation, due to the accumulation of lymph. In certain pathological conditions this ring is very prominent, and if pricked with a needle, may be seen to exude lymph. These phenomena explain certain contradictions in the results obtained by electrization. Cutaneous electrization, which incontestably arrests the contraction of the blood-vessels, produces a rubefaction of the skin, and does so evidently by producing a contraction of the lymphatic vessels. The changes in the color of the skin, so important in various diseases, and even the differences between individuals, depend not only upon the blood circulation, but also upon that of the lymph. If agents which produce capillary contraction redden the skin at the point of application, this effect is more often due to the disappearance of the white opalescent veil, thus rendering more apparent the underlying network of capillary blood-vessels.—*Le Progrès Médical*, No. 37, 1882.

A New Means of Detecting Fatty Degeneration of the Liver.—Dr. Lépine and Eymonnet describe a new method, of apparently some value, for determining the existence of fatty liver through examination of the urine. Their procedure is briefly as follows: Every trace of phosphoric acid, as existing in the phosphates, is removed from the urine by means of a mixture containing magnesia or of baryta water. The liquid is then evaporated and the residue calcined with potassium nitrate. If now this be redissolved in a little water acidulated with nitric acid, and treated as before with magnesia, it will be found that a minute quantity of phosphoric acid is still present. This comes from the decomposition, during the process of calcination of the glycerin-phosphoric acid, normally contained in the urine, which is a product of the decomposition of lecithin. In the normal condition glycerin-phosphoric acid is contained in the urine in very small amount—in proportion to the urea of 1 to 200. But in several cases of fatty liver, the authors state that they found it increased in proportion to the urea five- or even ten-fold. The relation of these two conditions—fatty degeneration of the liver and an increase of the glycerin-phosphoric acid in the urine—they explain by the fact that the fat of the liver contains lecithin. They have found this product in fatty livers in the large proportion of three per cent. of the entire hepatic substance.—*Archives Médicales Belges*, vol. xxii., 1882.

Extirpation of the Spleen.—In the *Centralblatt für Chirurgie*, November 18, 1882, are collected the statistics of a large number of cases of extirpation of the spleen. The indications for operation in the several cases were leucæmia, cystic and other tumors of the spleen, hypertrophy, floating spleen, and abscess. The results were far from encouraging. In thirty-seven cases of excision for disease of the spleen, twenty-seven (nearly seventy-five per cent.) resulted fatally. Of eighteen cases operated upon for leucæmia, only one recovered. The latter case was reported by Franzolini. The patient, a girl twenty-two years of age, presented well-marked symptoms of leucæmia. The white blood-corpuscles were about five times more numerous than normal. The patient made a good recovery with no untoward symptoms, except periodical painful attacks of congestion of the abdominal organs. These ceased after a few days. The number of white blood-globules steadily increased, and after four months was reduced to the normal.

Treatment of Malarial Coma.—Dr. Arch Dixon insists upon the hypodermic use of quinine in congestive chills, and says that any attempt to administer remedies by the mouth or rectum is only a waste of time, and results almost invariably in the loss of the patient. He inserts the quinine in warm solution deeply into the cellular tissue, and has never seen abscess or other bad effects follow its use. A bold employment of the wet pack is also urged.—*Southern Practitioner*, November, 1882.

Intra-uterine Vaccination.—Dr. Truzzi, vaccinated a number of pregnant women, during the last three months of gestation, with a view to determine the protection, if any, afforded to the child. The results were negative, as the children were all successfully vaccinated a few days after birth.—*Centralblatt für Gynäkologie*, November 18, 1882.

The Normal Position of the Stomach.—Dr. Lesshaft states that in a moderate-sized stomach the cardiac orifice is on a level with the articulations of the cartilages of the sixth and seventh ribs of the left side with the sternum. Posteriorly it corresponds with the left edge of the intervertebral disc between the ninth and tenth vertebræ. In the median line, the lower edge of the stomach is situated usually midway between the base of the ensiform cartilage and the navel. The lower border of the pylorus lies in a line running exactly in the middle between the linea sternalis and parasternalis. The contents of the stomach are passed along the sides to the pylorus, and then backward through the centre to the fundus. Lesshaft denies that the position of the stomach varies, or that the greater curvature is directed forward when the organ is distended.—*Centralblatt für Klinische Medicine*, November 11, 1882.

Hypodermic Injections of Morphine in Seasickness.—According to Dr. Coelho (*Allgem. Med. Central-Zeitung*, No. 81, 1882), seasickness is promptly controlled by subcutaneous injections of morphine in the epigastric region, in doses of one-eighth to one-sixth grain.

Influence Exerted by Various Agents upon Digestion.—From a series of experiments undertaken to determine the rapidity of the digestive process in the stomach under varying circumstances, Dr. Fleischer deduces the following conclusions: A pint of cold water, taken with the meal, exerts no influence upon digestion. A quart retards it somewhat, and the drinking of three pints causes a considerable retardation of the process. Walking for several hours at a tolerably rapid gait, lengthens the period of digestion. Hot poultices applied after eating materially hasten the process. Cold, in the form of ice-bags over the gastric region, produces no effect. Dilute hydrochloric acid and pepsine produced no effect upon digestion, either in healthy individuals, or in patients suffering from dilatation and catarrh of the stomach. These remedies in combination with hot poultices over the stomach accelerated the process of digestion.—*Allgem. Med. Central-Zeitung*, No. 61, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, December 30, 1882.

THE MANAGEMENT OF THE TEXAS YELLOW FEVER EPIDEMIC.

We have received from the Surgeon-General of the United States Marine Hospital Service a preliminary report upon the yellow fever epidemic of 1882 in Texas. It contains a description of the measures adopted for checking the spread of the fever and caring for the sufferers. As these measures have been criticised in some quarters this appears to be a good opportunity to present the facts before our readers.

The Marine Hospital Service did not undertake the measures against the epidemic until the fever had caused a panic in Texas, and the southern angle of that State was filled with fugitives.

The following provisions were then made:

Hospital and medical attendance were furnished to the sick poor. A free dispensary was organized in Brownsville, and a *cordon sanitaire* was established. This cordon extended along the south side of the railroad leading from Laredo on the Rio Grande to Corpus Christi on the Gulf, a distance of one hundred and sixty miles. It was one hundred and eighty miles from Brownsville, which town occupies the southern angle of Texas near the mouth of the Rio Grande. As soon as possible a shorter cordon, nearly parallel to the first, was established, extending from the Rio Grande at Santa Maria along the Arroyo Colorado to the Gulf. This line was about thirty miles from Brownsville. Persons wishing to pass it were stopped for ten days, their baggage was fumigated, fomites burnt, and they were then allowed to proceed. The cordon was effective in preventing further spread of the fever in Texas. It was soon found, however, that the disease was spreading among the Mexican towns along the southern bank of the Rio Grande, starting from Matamoras, a town nearly opposite Brownsville. Local quarantines on the Texas side were established to some extent. There was a disposition to break through these, however, and finally the Mexicans, not the United States, established a cordon along the Rio Grande from the western end of the United States cordon to Laredo, a distance of nearly three hundred miles.

This, we are told, had the desired effect of stopping the spread of the disease.

The result of the operations of the Service were that the fever was confined, in Texas, chiefly to Brownsville, where there were over two thousand cases with one hundred and fourteen deaths.

It is averred that the inhabitants of Brownsville were confined to their city and obliged to suffer from the fever; also, that the sanitary cordon is an obsolete measure not recognized as necessary or proper by the sanitary science of the day.

One must make some allowances on both sides in discussing this matter, since the friends of the National Board of Health seem anxious to strengthen it by attacking the Marine Hospital Service.

It is hardly true that the inhabitants of Brownsville were imprisoned and forced to take the fever, for the cordon allowed passage after ten days' delay. No doubt it was difficult for the poor to get away, but it must be shewn that it would have been less so under any quarantine restrictions in order to prove that the cordon itself was oppressive.

The statement that the sanitary cordon is a measure "not in accordance with the sanitary science of the day" is presumptuous twaddle. The "sanitary science of the day," as regarding inland quarantine, is only a mass of crude opinions, based on insufficient experience. Four years ago Dr. Herrick, writing on this subject in Buck's Hygiene, could only advance a few suggestions as to what measures sanitary science taught. The methods adopted by the National Board of Health in case of epidemics, have been reasonably successful. Yet none but enthusiasts would dare to base positive conclusions upon them. As to the cordon, sanitary experience, which is the only legitimate term at present, recommends it under certain conditions. In limiting the plague in Russia, in 1879, this cordon was highly successful. It was at that time recommended by the high authority of Hirsch and the International Sanitary Council. In fact, in sparsely settled countries, at least, sanitary experience still recommends it.

In conclusion we would say that it is quite too early to judge positively upon the merits of the measures for suppressing the Texas epidemic. Those who have already condemned it have, we believe, shown unfairness toward a zealous and intelligent officer, and have also exposed themselves to the charge of being injudicious and hasty in their criticisms.

FORCED FEEDING IN PHTHISIS.

THE practice known as forced feeding, or "super-alimentation," introduced by M. Debové and M. Dujardin Beaumetz, of Paris, has begun to attract some attention. This super-alimentation consists in forcing into the patient's stomach, by means of a sound, large quantities of highly concentrated food. It was first employed in phthisical patients who could not retain food on the stomach when taken in the ordinary way. Strange to say, these patients endured the unpleasantness of stomach-tubes, kept down the injected food, and improved in health. The method has now been extended to cases of hysteria with vomiting, also to dyspepsia and to various wasting diseases when the stomach is rebellious.

The food used is chiefly meat-powder, which is administered in milk, or bouillon, to which eggs may be added. This meat-powder appears to be a really useful preparation, and, as it need not be expensive, it will doubtless become more widely employed. It is made by taking lean meat, mincing it, spreading the paste on porcelain tables, and letting it dry at a temperature of 90° C. This is then taken and pounded into a powder, when it is ready for use. The dose given at first is small, being about twenty-five grammes at a meal. This amount is gradually increased until between four hundred and six hundred grammes are given daily. Such a dose is the equivalent of about four pounds of fresh meat. The amount of meat in an average diet is only about one pound, and when it is remembered that the meat-powder is administered dissolved in two litres of milk, to which several eggs are added, the significance of the term "super-alimentation" will be understood.

Under such a diet the urine is diminished in amount, but the urea is greatly increased, sometimes reaching eighty grammes per day—the normal amount being 32.5 grammes with an average diet. Sometimes albumen appears in the urine. Diarrhœa may occur, in which case pepsin and bismuth are added.

Phthisical patients rapidly gain weight, we are told, when thus forcibly fed, there being often an average daily increase of from eighty to one hundred grammes. Cough and expectoration diminish, and reparatory processes take place in the lungs. We do not hear it stated, however, to what extent permanent cures are produced.

It is hardly probable that American œsophagi will tamely submit to the introduction of a tube *ter in die*, and it is difficult to understand how such a process proves sedative to irritable stomachs, except in hysterical cases. The meat-powders, and the overfeeding, however, are sufficiently rational measures in many cases.

A NEW VIEW ON THE PATHOLOGY OF GOUT.

THE presence of uric acid in the blood of gouty subjects, and the deposition of urates in their various tissues, have been long recognized as factors in the production of the local manifestations of this disease; and certainly theories have not been wanting to account for the occurrence of the well-known nodosities of gout. Nevertheless, a truly satisfactory and convincing explanation concerning their ultimate development has not hitherto been found. Ebstein, of Gottingen, now attempts to supply the missing information. He has recently conducted a long series of experimental investigations and anatomical researches in this direction. The practical outcome of his labors was announced at the German Medical Congress, held at Wiesbaden in the present year.

According to him the characteristic lesion of gout is a localized tissue necrosis occurring prior to any deposit of urates. Indeed, the latter he holds to be directly attributable to the former.

A careful examination of the fibrous and cartilaginous structures revealed the presence of a number of points of more or less necrosed tissue. They became, though never until the necrotic process was completed, the seat of the characteristic urate deposits. Such centres he found in the kidneys, the articular and fibrous cartilages, the tendons, and the intermuscular and subcutaneous connective tissues. He further observes that about these foci is developed a secondary inflammation, differing in character according to the tissues in which it arises. In the cartilages it takes the form of cellular proliferation, while in the other tissues it occurs as a small-celled infiltration.

By causing artificially a suppression of urine in birds, the author succeeded in producing in them typical necrotic foci and the subsequent deposit of crystallized urates. That the uric acid was the responsible agent in the development of this tissue necrosis Dr. Ebstein proved to his satisfaction by another series of experiments. With strict antiseptic precautions, he injected uric acid dissolved in a solution of phosphate of soda, or simply held in suspension, into the cornea of rabbits. The invariable result was inflammation followed by corneal opacity.

On the other hand, the injection of urea and other chemically allied substances led only to negative results. The author also found that uric acid was neither a septic poison nor a mechanical irritant to the tissues. Its action in causing local necrosis, with subsequent urate deposits, was therefore a purely chemical one.

The well-known selective affinity of these deposits for periarticular fibrous tissue and cartilaginous structures is left unexplained by Ebstein. But we are informed that he will be more explicit in all

particulars in his forthcoming comprehensive treatise on the pathology and treatment of gout. Meanwhile we may be content to have received a more rational interpretation of certain familiar phenomena observed in gout than most of those that have so far been offered to the profession. And it is to be hoped that this advance may lead to a corresponding improvement in the treatment of a frequently intractable complaint.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 21, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE Northwestern Medical and Surgical Society, through its Treasurer, Dr. Fruitnight, donated to the Journal fund of the Academy the sum of $100. The thanks of the Academy were returned through its President to the Society for its generous donation.

PRESENTATION OF THE BUST OF THE LATE PROFESSOR WHITE, OF BUFFALO.

DR. AUSTIN FLINT, in behalf of James Platt White, of Buffalo, presented a marble bust of the late Professor White, of Buffalo. It was the work of J. G. Mitchell, of Rochester, sculptor. The presentation was made in a few well-chosen words, and was accompanied by the resolution that "The New York Academy of Medicine accepts with much gratification the marble bust, and accords to it gladly a permanent place in the hall of the Academy."

The resolutions were seconded by Dr. T. G. Thomas. The President thanked Dr. Flint and Dr. Thomas for the eloquent tribute which they had paid to the deceased honorary fellow, and in behalf of the Academy accepted the generous gift.

DR. T. GAILLARD THOMAS then read a paper entitled

A CONTRIBUTION TO THE SUBJECT OF THE REMOVAL OF THE UTERINE APPENDAGES (TAIT'S OPERATION) FOR RECURRENT PELVIC INFLAMMATIONS; WITH PATHOLOGICAL SPECIMENS.

In the *British Medical Journal* for July 29, 1882, Mr. Tait enunciated views which were entirely at variance with those heretofore held and accepted with reference to certain pelvic diseases, and made extended remarks on the diagnosis and treatment of chronic inflammation of the ovaries. Since the time of Bennett, of England, Simpson, of Scotland, and Sims, of America, a vast deal of attention had been given to affections of the uterus and of the vagina, etc., while disease of the ovaries and of the Fallopian tubes had been left in a cloud of ignorance and uncertainty. Tilt, a firm and constant advocate of the claims of ovarian pathology, had stood almost alone, and had enunciated views with which only few sympathized and still fewer endorsed and sustained. The views which had been advanced by Tait seemed to be those of an original surgeon and were distinct, and if accepted would open a new field and exert upon this department of medical science an entirely new influence. The most original and valuable views enunciated by Tait were embraced under the following heads:

First.—He assumed that the view formerly held, that laparotomy and allied operations should be postponed until absolute risk to the life of the patient rendered them necessary, should be abandoned; and that in the hands of the expert they were so far from danger as to be justifiable even when life was not jeopardized.

Second.—That the usually accepted doctrine that menstruation depended upon ovulation was entirely erroneous.

Third.—That the ovaries had nothing whatever to do with menstruation, but that this phenomenon depended upon the Fallopian tubes.

Fourth.—That many of the bad cases of abnormal menstruation were relievable only by extirpation of the ovaries and tubes.

Fifth.—That in chronic ovarian disease the Fallopian tubes were chiefly at fault.

Sixth.—That the mortality had been only one in his last thirty-five operations, and that this slight loss of life was susceptible of diminution in the future.

Seventh.—That in all those cases heretofore regarded as instances of menstrual recurrent pelvic cellulitis or peritonitis were really tubal dropsy and ovarian disease. The last statement was not made in the paper alluded to, but had been received from Dr. T. A. Emmet, who obtained it from Mr. Tait in a private conversation.

Dr. Thomas further stated that removal of the uterine appendages had nothing whatever to do with the subject of ovariotomy; that the latter operation was resorted to for the removal of large or increasing tumors which, if not removed, almost invariably destroyed life within a few years. The removal of the uterine appendages, or Tait's operation, was performed for severe menstrual disorders and nervous disturbances, which did not so much jeopardize the life of the patient as make it miserable and almost intolerable. The history of ovariotomy was well known. The history of oöphorectomy and its modifications could be summed up in a few sentences. In July, 1872, Hegar, for the relief of certain constitutional disturbances, extirpated ovaries not affected by tumors. Five days afterward the operation was performed by Tait in England. Neither of these operations was published. In August of the same year, Dr. Robert Battey, of Georgia, not only performed the operation but had it published to the world and obtained for it the consideration of the profession. Credit had been chiefly accorded, and deservedly so, to Battey, although he was immediately preceded by two other operators. The operation to which Tait lays claim consists in the removal of the Fallopian tubes as well as the ovaries, because he believes that in that way alone can menstruation be controlled, and also because he regards tubal disease, the most important of the two pathological factors, as invariably present in chronic ovaritis. Dr. Thomas did not propose to consider Tait's views in an analytical manner, but simply to report four cases in which tubal dropsy existed, associated with chronic ovaritis as described by Tait. The cases reported were too recent to permit conclusions to be drawn with regard to ultimate results.

CASE I.—A colored woman, thirty years of age; the mother of one child eight years old. Had suffered from menstrual, or recurrent pelvic inflammations, due, as had heretofore been supposed, to

some unknown influence. Her uterus was large, anteverted, and gave forth too free menstrual flow. Thinking that, perhaps, profuse menstruation was due to fungoid degeneration of the lining membrane, Dr. Thomas carefully curetted the entire inner surface of the uterus, but to his surprise removed only a very few fungoid growths. An anteversion pessary was introduced and resulted in absolute harm. Upon more careful examination he detected enlarged ovaries, and strongly suspected that it was one of the cases in which ovaritis and tubal dropsy were coincident. Further examination convinced him more and more of the truth of this suspicion, and he decided to make an explorative incision, and, if the condition existed, to perform Tait's operation. The incision was made; one ovary was found cystic, and its Fallopian tube was large and felt very much like a coil of intestine. The tube, the ovary, and the ovarian ligament were ligated and removed. The same condition existed upon the opposite side and the same procedure was adopted. This, together with all the subsequent operations, was performed under the strictest antiseptic precautions except with regard to the use of the spray. The patient made a prompt recovery; one menstrual period had passed and no sanguineous flow had occurred. The specimen was presented.

Case II.—The patient was twenty-five years of age; had been married three years; was the mother of one child eighteen months old. She entered his service in the Woman's Hospital. Her menstrual history began at the age of seventeen, and before marriage gave her no trouble whatever. Nine months after confinement she had an attack of pelvic inflammation which occurred just at the time of the cessation of the first menstrual period after confinement. Lactation had ceased. It was probably an attack of cellulitis or peritonitis. Similar attacks had been repeated. There was a constant leucorrhœa and difficulty in locomotion. There was partial laceration of the cervix and perineum. There was a mass the size of a hen's egg in the position of the left ovary, and there was exquisite tenderness in the ovarian region and all about the uterus. Dr. Thomas decided to make an explorative incision, to be followed by Tait's operation if the condition proved to be such as to warrant it. Some cysts occupied the ovary, and the tubes were distended with a large accumulation of pus. Both ovaries and tubes were removed, and could be seen in the specimen presented.

At this point, Dr. Thomas remarked that, while Battey's operation could be performed without coincident removal of the tubes, the latter procedure could not be performed without removal of the ovaries.

The patient recovered without any remarkable rise of either the temperature or the pulse.

Case III.—Miss ——, twenty-two years of age, entered his private hospital. Her menstrual life began at the age of fourteen, and at the first epoch she suffered from severe dysmenorrhœa. During the last year the pain had been almost constant, lasting throughout the entire interval, and greatly increased at each menstrual period. Physical examination revealed enlarged and somewhat prolapsed ovaries, although the prolapsus was not marked. He was unable to discover any enlargement of the Fallopian tubes. Dr. Emmet had previously examined the patient and believed that he found evidences of pelvic inflammation. Dr. Thomas removed both ovaries and tubes, and found the former filled with small cysts, and the latter distended with pus and the lining membrane inflamed. The pus, however, was not confined to the cavity of the tubes. The condition present was that which had been described by the older writers as "profluent dropsy of the tubes." The specimen was accidentally lost. The patient recovered without an unfavorable symptom. No menstrual discharge occurred at the next period, and the patient was perfectly comfortable.

Case IV.—Miss ——, aged twenty-seven, entered his private hospital. Her menstrual life began at the age of fourteen, and she suffered from severe dysmenorrhœa up to two years ago. From that date she had been a constant invalid on account of repeated attacks of pelvic peritonitis, occurring just before menstruation. In September last one of these attacks occurred, and the patient nearly lost her life, the temperature rising to 104° F., the pulse to 140, and there was excessive pain. At the time of the operation she was emaciated, exceedingly pale, and there was a depreciation of vital forces which resembled that seen in the third stage of pulmonary consumption. Her temperature was 100° F., the pulse 115 to 120, the stomach was irritable, and she suffered from never-ceasing pelvic pain. The ovaries were not very much diseased, although they contained a number of small cysts, but the Fallopian tubes were in a condition of tubal dropsy, and throughout their entire extent were firmly bound down by adhesions. The operation was tedious and difficult, and at its conclusion no one who witnessed it could avoid making an unfavorable prognosis. The patient died on the sixth day. The specimen was presented.

These cases made up Dr. Thomas' entire experience with reference to this subject. All that he aimed to do in the paper was to hold up the views of a brilliant and an original investigator. Tait's immediate results from oöphorectomy had been, like Keith's and Wells' from ovariotomy, exceedingly gratifying. Out of seventy-five cases there had been only six deaths, and out of the last sixty-one cases there had only been three deaths, and out of thirty-five operations for pure chronic ovaritis with tubal dropsy there had been only one death. No such records had been made in this country. The question why statistics were better in Europe than in this country was interesting and important, and it behooved American operators to look at the matter in a most careful manner, and endeavor, if possible, to determine why the success had been greater there than here.

Dr. H. J. Garrigues then read a paper entitled,

GASTRO ELYTROTOMY (THOMAS' OPERATION) COMPARED WITH OÖPHORO-HYSTERECTOMY (PORRO'S OPERATION).

During the last four years gastro-elytrotomy had been performed three times: the operators were, Hime, of Sheffield, Edis, of London, and Gillette, of New York. These, together with the cases which had already been performed, made eight, in which there had been four recoveries and four maternal deaths. The results compared favorably with those from the rival operation, oöphoro-hysterectomy, or Porro's operation. According to Harris, of Philadelphia, Porro's operation had been performed eighty-four times, with thirty-seven recoveries and forty-seven deaths.

The chief objection which had been urged against gastro-elytrotomy had been that it could not be carried out according to the strictest rules of antiseptic

surgery; but Dr. Garrigues believed that the operation could be rendered sufficiently antiseptic to warrant its further trial, and especially until a greater number of Porro's operation had been performed under conditions which were only equally favorable.

Dr. Garrigues then directed attention to the danger of hemorrhage in Thomas' operation, and concluded that it was not liable to be so much as in Porro's operation, where it was likely to be very severe. The difficulty in arresting hemorrhage from the stump in Porro's operation was very great. He then proceeded to review the different methods which had been employed for controlling this hemorrhage, such as the ecraseur, the elastic ligature, the application of the soft rubber tube of Esmarch, etc.

With reference to shock and exhaustion, they had so far proved to be the only causes of death in gastro-elytrotomy, but by operating earlier and only on proper subjects, he believed the dangers from these sources could be very greatly overcome. He believed that in favorable subjects the danger from shock was much smaller in gastro-elytrotomy than in Porro's operation. The danger from exhaustion was greater in gastro-elytrotomy than in Porro's operation, on account of the profuse suppuration, which almost inevitably occurred. Peritonitis might occur after gastro-elytrotomy, but he believed it was infinitely less likely to do so than in Porro's operation. Several other accidents were mentioned which were liable to occur with either operation, such as tetanus, pulmonary œdema, heart-clot, etc.

It had been believed that the intra-peritoneal method of treating the stump in Porro's operation would yield better results than had been yet obtained. The method, however, had been tried in five cases, and four of the patients died. He believed that in the country the old classical operation, Cæsarean section, could be performed with better results than either Thomas' or Porro's operation. In hospital practice gastro-elytrotomy should be the operation adopted, if the cervix was dilated or dilatable. If the circumstances were such as to render operative interference necessary before dilatation of the cervix had begun, he should prefer Müller's operation.

The following conclusions were reached: 1. Thomas' operation, or gastro-elytrotomy, had been performed eight times; one-half of the mothers recovered, and all the children survived except two, which were dead before the operation. 2. Gastro-elytrotomy might be performed with many antiseptic precautions. 3. Porro's operation had given less favorable results than gastro-elytrotomy. Müller's modification has given no better results than Porro's. 4. The dangers from hemorrhage, peritonitis, septicæmia, etc., were greater in Porro-Müller's operation than in gastro-elytrotomy. 5. The intra-peritoneal method of treating the stump with Porro's operation had been adopted in five cases, and four patients died. 6. One advantage of the Porro-Müller operation was the possibility of performing it before the commencement of labor. 7. Gastro-elytrotomy was less repulsive to the patient than was either of the other operations, and it could be performed with a less number of assistants. 8. It did not sterilize the woman. 9. All who had performed it upon the cadaver preferred it to oöphoro-hysterectomy (Porro's operation). 10. In country practice the Cæsarean section would probably be preferred to all its substitutes.

Both papers being before the Academy, the President asked Dr. W. M. Polk to open the discussion. He spoke first with reference to the position which the occupation of gastro elytrotomy should occupy, and, second, with regard to the supposed difficulties in the performance of either Cæsarean section or Porro-Müller's operation.

First, in placing the operation, it seemed to him that it was, perhaps, a mistake to put it in direct antagonism with Cæsarean section or any of its modifications. There were fixed indications for Cæsarean section, and there were cases in which it was the only operation proper to be performed. On the other hand, there were many cases in which Cæsarean section had been performed which might give way to gastro-elytrotomy. Besides, there were certain cases in which embryotomy had been resorted to, and in which gastro-elytrotomy might well have been performed. In brief, he believed that when the operation was properly placed it would rest between embryotomy, upon the one hand, and Cæsarean section upon the other. So far as Cæsarean section was concerned, gastro-elytrotomy could never take its place as a complete substitute. With regard to the difficulties in performing Cæsarean section, he referred to the remarks made by one of its ablest advocates, Dr. Harris, of Philadelphia, who spoke of it as a scientific operation which required extraordinary anatomical skill. Dr. Polk, however, had reached the conclusion that it was a very easy operation to perform when placed in contrast with either Porro's or Dr. Thomas' operation.

Dr. Polk then passed in review the successive steps necessary to be taken in performing Porro's operation and Thomas' operation, and compared them up to the point at which the child was reached. In the first place, the hemorrhage in either was not liable to be excessive or beyond the control of the surgeon. With reference to Porro's operation, it was necessary to exercise extreme care on entering the peritoneal cavity, for no operator could say that he would not find a coil of intestine in contact with the abdominal wall. In performing gastro-elytrotomy, opening the peritoneum *might be avoided* in such a manner as to reach the subperitoneal space by making the incision below the reflexion of the peritoneum and then pushing this membrane up from its attachments in the iliac fossa at the brim of the pelvis, and in the anterior pelvic fossa as far as the cervical wall. When the transversalis fascia was reached the further steps in the operation should be taken without the use of the knife. This could not be accomplished in the Porro-Müller operation after the peritoneal cavity had been opened. With reference to shock, Dr. Polk believed that it was much greater in the Porro-Müller operation than it could possibly be in gastro-elytrotomy.

After the vagina had been entered, the cervix being dilated, came what he regarded as the greatest difficulty in the performance of gastro-elytrotomy, and that was the tilting the uterus sufficiently far to bring the cervix above the brim to enable the accoucheur to perform extraction either with the forceps or by means of version. He believed, however, that the external incision could be continued up to the last false rib if necessary, and that it was not necessary to injure the peritoneum; making that extension gave considerable space for manipulation. It was absolutely necessary while making traction to support carefully the sides of the incision, thus removing the dangers to which the ovarian vessels

would otherwise be exposed. Dr. Polk believed that there was no necessity for injuring the base of the bladder, but should it accidentally be injured harm would not necessarily follow. He also believed that it was unnecessary to injure the ureter and that there was no danger, necessarily, of injuring the uterine artery. The ovarian vessels were in danger only while making traction upon the uterus.

Dr. Polk then described at some length the method of entering the vagina, speaking of the little danger that would follow a small incision into the bladder, should it accidentally be made, and also referred to the position of the uterine artery in the pregnant and non-pregnant condition. He believed that the danger of suppuration in Thomas' operation could be overcome to a very great extent by sewing up as much as possible the upper part of the external wound, leaving the lower portion open and introducing a drainage-tube. He thought it must be evident to all that the dangers in Cæsarean section and its modifications were very much greater than those in gastro-elytrotomy. The chief point to which he wished to direct especial attention was the position which the operation should occupy, namely, that there were cases in which Cæsarean section was the only operation which could properly be resorted to, and that gastro-elytrotomy occupied a position between Cæsarean section, on the one hand, and embryotomy on the other.

Dr. I. E. Taylor believed that Cæsarean section, when performed early, was superior to all operations which had been proposed as substitutes for it. With reference to Porro's operation, statistics showed for it more favorable results than had been obtained by gastro-elytrotomy. Thomas' operation was doubtless a valuable one in certain cases, but peritonitis, metritis, etc., being nearly barred out by improved methods of treatment, there remained the question of hemorrhage, which was a most important one. Besides, the cervix must be dilated in some way before delivery could be attempted, and after that had been accomplished version, perhaps the forceps, and possibly embryotomy, with all its difficulties and dangers, must be resorted to. He believed that the chances of saving the mother and the child were much better with Porro's operation than with gastro-elytrotomy. Dr. Taylor discussed at some length the objectionable features of all these operations.

Dr. Skene thought it was hardly fair to compare the statistics of the older operations with the statistics afforded by laparo-elytrotomy. When laparo-elytrotomy had had equal opportunities with Cæsarean section, he thought it would then be time to bring forward statistics, and previous to that it was a misuse of statistics to quote them when comparing the two operations. He felt perfectly confident that when laparo-elytrotomy had had the same opportunity, and had been submitted to the same extensive test that had either Cæsarean section or Porro's operation there would be no question in regard to its final success. The difficulty of removing the child from the uterus, which had been spoken of by Dr. Taylor, he believed to have no foundation in fact, and that the obstruction presented was that offered by the bony pelvis rather than by the uterus. With reference to one of his patients dying with shock, as had been mentioned by Dr. Garrigues in his paper, he took exceptions, believing that the patient died from exhaustion incident to severe operations which had preceded the laparo-elytrotomy. With reference to controlling hemorrhage in laparo-elytrotomy, it could be easily done. The simplicity of the operation, and the ability to control hemorrhage, placed it infinitely above either of the other operations with which it had been compared.

Dr. Lusk remarked that he had seen only one Porro operation, and had not witnessed a gastro-elytrotomy, and therefore his remarks would be based upon study rather than experience. With a contracted pelvis and a dilated cervix he believed that there was no operation to be compared with gastro-elytrotomy, but there were cases in which dilatation did not exist and operative interference was demanded early, and we therefore needed some alternative. Gastro-elytrotomy might finally come to meet the requirements of these cases, but when Porro's operation was proposed it seemed to meet all the indications. Porro's operation had been performed in selected cases; but despite all these advantages there had been only forty-seven recoveries and fifty-five deaths, which was rather a large mortality. Patients still died of shock, many of septicæmia, and a few from hemorrhage, and the question arose whether it was not time to relinquish the operation. Was the old classical operation of Cæsarean section deserving of the bad reputation which had been heaped upon it? Dr. Lusk then spoke of the statistics which had been gathered concerning the success of Cæsarean section in various localities, and remarked that when we turned from hospital experience to results which had been obtained in country districts there had been collected a sufficient number of cases of which complete records had been obtained to place its success above any of the proposed substitutes. The operation was performed many times, under conditions which would not be admitted for a moment when considering the propriety of either Porro's operation or gastro-elytrotomy. There was one danger in Cæsarean section, and that was from gaping of the uterine wound. But that could be overcome by closing the wound with sutures. The results had been just as good as those obtained in any of the other operations. According to Harris, in sixteen cases in which the uterine sutures had been applied there had been eight recoveries and eight deaths. Dr. Lusk then spoke of the modification of the incision which had been proposed, namely, to dissect up the peritoneum for a distance of perhaps two-fifths of an inch, and then remove a melon-shaped piece from the wall of the uterus, so as to permit the peritoneal surfaces to be folded in and brought in contact with each other by sutures.

Dr. Gillette thought that laparo-elytrotomy was not to be compared with Porro's operation, either with reference to danger or difficulty in its performance. He thought, however, that the operation had not advanced sufficiently far to be compared with either Cæsarean section or Porro's operation, or any of its modifications. He was unwilling to make the plea for Cæsarean section which had been made by Dr. Lusk. He believed that there would always remain the danger from peritonitis, and also from gaping of the wound, no matter how carefully the stitches were introduced, even after adopting the modification embraced in folding in the peritoneum. The uterus which had been opened by Cæsarean section would not contract and maintain contraction in all cases any more than would the uterus after normal labor.

Dr. T. A. Emmet remarked, with reference to Tait's operation, that he had had no personal ex-

perience in its performance. He had seen a number of cases in which it had been performed, and must say that he saw nothing else when abroad which interested him so much and at the same time puzzled him exceedingly. He saw in Tait's laboratory sixty specimens, all of which had been removed within the last eighteen months, and it was surprising to him where all these cases could come from, and what could be the explanation. Whether the condition of affairs described by Mr. Tait was more common there than in this country he was not prepared to say. Many years ago he had the opportunity to perform a large number of autopsies among immigrants and he had never seen the condition referred to more than a dozen times. He asked more particularly as to what would be his guide with reference to performing the operation, and Mr. Tait was unable to give him any answer except that in all cases of chronic pelvic inflammation which did not get well of themselves within a reasonable time he opened the abdomen and invariably found this dropsical condition of the tubes, distended with either serum or pus. Dr. Emmet was also surprised at the success of the operation abroad, and had had opportunity to see that the women upon whom it had been performed had been very much improved by it. The improvement which had followed the operation had been something beyond conception. There seemed to be no question with reference to Tait's success, but with regard to this operation upon the broad ligament he was not prepared to perform it at present. He wished to wait a little farther for additional light upon the subject.

Dr. Garrigues, in closing the discussion, said that he favored the revival of the old Cæsarean section operation as referred to by Dr. Lusk. As to excising the muscular tissue of the uterus and removing a portion, as mentioned by Dr. Lusk, he thought that modification could only have a limited degree of usefulness. It would be an excellent resource in cases where the muscular tissue bulged so that the edges of the wound could not be brought closely together, but when the edges of the incision in the uterus could be closely coaptated, he thought it was altogether unnecessary to adopt the modification. However desirable it might be to coaptate two peritoneal surfaces with each other, the importance of which had been pointed out many years ago by Mr. Spencer Wells, he thought that it was not desirable in these cases when the edges of the incision could be closely brought in contact and held there by deep and superficial sutures. In a case which he had already reported union by first intention had taken place throughout nearly the entire extent of the wound, although the patient lived only a short time after the operation was performed.

With reference to Thomas' operation, he thought it was unfair to compare it by means of statistics with the old operation. It was well known that it had been performed substantially by Ritgen and Baudelocque, but it had been so entirely changed by Dr. Thomas that we should accept it as it now stands, and as devised and revised by Dr. Thomas, and study the results as obtained from that date.

The Academy then adjourned.

Milk in Nasal Catarrh.—Copious injections of milk are recommended in nasal catarrh.

Mosquito Bite.—A one-tenth per cent. solution of atropine is said to instantly relieve its itching.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 16, 1882, to December 23, 1882.

Alden, Charles H., Major and Surgeon, now in St. Paul, Minn., to proceed to Fort Yates, D. T., and report to the Commanding Officer of that post for duty. S. O. 212, par. 3, Department of Dakota, December 14, 1882.

Banister, J. M., Assistant Surgeon, to proceed to camp on White River, Col., and report to the Commanding Officer for duty. S. O. 250, par. 7, Department of the Missouri, December 11, 1882.

Brown, Justus M., Major, Surgeon. Granted leave of absence for fifteen days. S. O. 119, Department of the South, December 11, 1882.

Hall, W. R., Assistant Surgeon. Leave of absence for one month is granted. S. O. 250, par. 8, Department of the Missouri, Dec. 11, 1882.

Maddox, T. F. C., Assistant Surgeon. To report to the Commanding Officer Fort Clark, Texas, for duty. S. O. 138, Department of Texas, December 16, 1882.

Porter, J. Y., Captain and Assistant Surgeon. To proceed to St. Francis' Barracks, St. Augustine, Fla., and report to the Commanding Officer of that post for temporary duty. S. O. 119, par. 2, Department of the South, December 11, 1882.

Hospital Steward W. T. Dalby assigned to duty at Fort Verde, A. T. S. O. 181, Department of Arizona, December 9, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 23, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Dec. 16, 1882.	0	10	60	4	30	48	0	0
Dec. 23, 1882.	0	9	55	2	59	61	0	0

Medical Society of the County of Warren (N. Y.) and the New Code.—At a meeting of the Medical Society of the County of Warren, held at Glens Falls, December 19th, the following was adopted: *Resolved*, That the delegate of the Medical Society of the County of Warren to the Medical Society of the State of New York be instructed to vote for the repeal of the New Code at the next meeting of the State Scciety. On motion, the Secretary was instructed to transmit the above resolution to the New York Medical Record for publication.

Diphtheria in Philadelphia and the United States.—The number of cases of diphtheria in Philadelphia the past year has reached very nearly 900, being about the rate of 43.34 deaths to every 1,000 deaths, according to the *Sanitary Engineer*. The ratio of deaths throughout the United States was, in 1880, according to the *Medical News*, 51.33 deaths per 1,000.

INDEX.

A

Abbott, Dr. A. W., how to count a rapid pulse, 194.
Abdomen, contusions of, 687.
Abortion, produced by hyperemesis, 392.
Abscess, central pulmonary, mistaken for empyema, 55; cerebral, 224; hepatic discharge of into the bronchi, 572; hepatic in a child, 412; opening of a spinal into a bronchus, 271; popliteal, 231; post-pharyngeal, 106; retropharyngeal, 273.
Abscesses, in elephants, 531.
Absorption, proper vehicles for, 696.
Acid, arsenious, 389; boracic, in furuncle, 573; carbolic, 362; carbolic, as a germicide, 314; carbolic, in the abortive treatment of the eruption of small-pox, 125; carbolic, in the treatment of buboes and lymphadenitis, 40; carbolic, in piles, 136; carbolic, poisoning with, 46, 672; chrysophanic, internal administration of, 278; hippuric, 414; nitric, for chilblains, 531; phenic, cases treated with, 85, 104; phenic, in snake bite, 375; phenic, in whooping-cough, 168; phenic, in yellow fever, 145; pyrogallic, in phagedenæ, 237; salicylic, action of upon the ear, 489; upon the skin, 711; salicylic, foot-powder of, 388.
Acne, 167.
Aconite, preparations of, 616.
Addison's disease, 81.
Adenoma, mammary, 546; of the neck, 133; uteri, 216; with cirrhosis of the liver, 377.
Agnew, Dr. C. R., the care of the chronic insane, 722; the prevention of irregular practice, 560.
Ague, burned alum in, 625.
Air-passages, foreign bodies in, 125, 599, 733.
Albumen, examination of urine for, 208; in the urine, new tests for, 559, 764; retractility of, 12.
Albuminuria, 124; absence of in amyloid kidney, 295; observations on, 710.
Alcohol, antipyretic action of, 156; aspects of the question of, 305; at meals, 196; in burns and scalds, 252.
Alcoholism and strychnia, 434; chronic, 302.
Alimentary canal, foreign bodies in, 195.
Alimentation, forced, and washing in dyspepsia, 560.
Allen, Dr. Harrison, notice of book by, 605.
Allen, Dr. Wm. H., notice of death of, 643.
Allison, Dr. H. E., tumor of the brain causing epilepsy, 229.
Alum in ague, 625.
Amblyopia, nicotinic, 183.
Amenorrhœa, and pilocarpin, 132.
American Academy of Medicine, 519, 523.
American Dermatological Association, 307.
American Gynecological Society, 381.
American Medical College Association, 16.
American Neurological Association, 18.
American family, the decadence of the, 126.
Americanitis, acute, 518.
Amputation, contraction of the vessels after, 573.
Amputations, Billroth's, 577; diminution in mortality after, 363; of the upper extremity, 728; sub-periosteal, 124.
Amyl nitrite, 177, 476; for ague, 324; hypodermic use of, 111; in singultus, 231.
Anatomical proportions, 319.
Anatomy, a new law in Maryland, 530.
Anæmic, pernicious, arsenic in, 55.
Anæsthesia, alcoholic, 135; laryngeal, 28, 560.
Anæsthetic, Edison's, 374.
Anæsthetics, 244; danger of giving during or immediately after repeated doses of morphia, 274; new, 644; the safest, 111.
Andrews, Dr. J. A., medical impressions of China, 52.
Aneurism, by anastomosis, 636; double cardiac, 104; of the aorta, 191, 634; of abdominal aorta and superior mesenteric, 635; of the posterior tibial, 730; of the right middle cerebral artery, 75; of the right subclavian artery, 413; popliteal, 610; double popliteal, 303; traumatic axillary, 303.
Animal heat, influence of the central nervous system in the regulation of, 139.
Ankle-joint, conservative surgery in chronic disease of, 570.
Antipyretics in typhoid fever, 213.
Antiseptic atmosphere, 303.
Antiseptic occlusion, primary, in military practice, 484.
Antisepticism, 244.
Anuria without uræmia, 12.
Aorta, aneurism of, 191, 634; abdominal, aneurism of, 635; anomalous distribution of arteries from the arch of, 582; rupture of, without aneurism, 130.
Apoplexy, placental, and shortened funis, 74.
Arabs, experimenting upon the, 549.
Armstrong, John A., medical Latin, 566.
Armstrong, Dr. W. P., notice of book by, 411.
Army retirement bill, 71.
Arsenic, in pernicious anæmia, 55; and iodine in intermittents, 336.
Arsenical paralysis, 499.
Arsenite of soda, in phthisis, 265.
"Artefacts," 667.
Artery, external iliac, ligature of, 303; innominate, ligation of, 303; middle cerebral, aneurism of, 75; pulmonary thrombosis of the, 102.
Arteries, broad animal ligatures applied to, 103.
Arthritis deformans, 611; fungous, 74.
Ascarides lumbricoides, treatment of, 433.
Ascites of alcoholists, 480.
Ashhurst, Dr. John, Jr., notice of book by, 578.
Aspergillus in the ear, 711.
Asses' milk, 363.
Asthma and nasal polypi, 122; ipecac in, 56; resorcin in, 55.
Asylum reform movement, 630.
Asylums, Kentucky insane, 549; the city insane, and the grand jury, 557.

Asymetry, cerebral, 362.
Ataxia, locomotor, complicated with acute cardiac disease, 651, 661.
Athetosis relieved by nerve-stretching, 21.
Atropia for ear-ache, 391; for mosquito bite, 744.
Atwood, Dr. Francis, notice of death of, 250.
Auditory canal, external, foreign body in, 676.
Austin, Dr. G. L., notice of book by, 691.
Axilla, lipoma of, 634.
Azoospermism, syphilitic, 182.

B

Bacillus, 415; and man, 252; of syphilis, 392; of tubercle, 195, 390, 392, 503, 519; of tuberculosis, prospective attack on, 576; or fat, 643.
Bacteria and syphilis, 380.
Bacterium, a sphæro, 672.
Balfour, Mr. F. M., notice of death of, 280.
Ballery, Dr. G. H., silk-worm gut sutures in gynecological surgery, 121.
Banks, Dr. E. A., whalebone instrument for treating tight stricture of the urethra, 419.
Barker, Dr. P. C., the vaccination question, 58.
Bartholow, Dr. Roberts, notice of book by, 578, 579, 692.
Bath, the electrical, 409, 461, 526.
Baths in surgical diseases, 108.
Battery, a new medical, 641.
Beach, Dr. Willard P., hospital report, 655.
Beale, D. Lionel S., notice of book by, 718.
Beard, Dr. George M., a case of trance lethargy, 306; nervous diseases connected with the male genital function, 617; notice of book by, 188.
Beaumetz, Dr. Dujardin, on the treatment of croup, 673, 701; diphtheria, 393, 421.
Belladonna, and opium, 28; poisoning by, treated with bromide of potassium, 308.
Bellevue Hospital Report, 570.
Benedict, Dr. A. C., trumped-up lunacy, 330.
Bennett, Dr. Ezra B., notice of death, 528.
Bennett, Dr. W. H., habitual smoking, 731.
Berry, Dr. J. J., internal derangement of the knee-joint, 230.
Bibby, Dr. Edward N., notice of death of, 631.
Biernier, on contracted kidney, 349.
Bigelow, Dr. Henry J., 275.
Bile, medicinal agents in after-absorption from the rectum, 599.
Bill, Dr. J. H., a plea for a more thorough study of chemistry in medicine and the arts, 175.
Black ants as antiscorbutic food, 585.
Bladder, catarrh of, bromide of potassium in, 545; primary cancer of, 612; spontaneous perforation of, 636.
Blenorrhœa, neonatorum, 137.
Blind man, what he sees, 636.
Blindness, decrease of, in Prussia, 531; the prevention of, 219; transitory, following childbirth, 375.
Bliss, Dr. D. W., feeding per rectum, 64.
Blisters, new method of preparing, 558.
Blood, abstraction of from the right heart, 705; feeding with dried, 515; of animals living at a high altitude, 489; significance of peptone in, 728; the new corpuscle of the, 464, 644.
Blood-corpuscles, nucleated, differential staining of, 153; red, decrease of, during the administration of iodoform, 350.
Bloodletting in heart diseases, 462.
Blood-vessels, contraction of, after amputation, 573.
Bodenhamer, Dr. Wm., hemorrhoidal diseases, 225.
Body-snatching in Philadelphia, 691.
Bone, diseases of, in puerperal state, 571.
Bones, fœtal, in the uterus, 657; healing process in fractured, 412.
Burns, local treatment of, 653.
Bone-setters, natural, 279.
Bone-setting, 246.
Borcheim, Dr. L. E., fracture of tibia and fibula, 730; paroxysmal hæmatinuria, 699.
Borgias, the poison of, 531.
Borate of quinoidine, 388.
Boro-glyceride, 267, 356.
Boston City Hospital, 402.
Bosworth, Dr. F. H., a nasal electrode, 331.
Bothriocephalus latus, 123; new variety of, 270.
Boylston prize and medical women, 100.
Brain, abscess of, 224; pigment in, 633; sarcoma of, 191, 220, 442; the face as an index of, 302; tumor, 20; weighing 61 ounces, 334; weight and brain power, 504.
Brandt, Dr. Wm. E., diarrhœa tubularis, 33.
Breast, carcinoma of, 375.
Breath-sounds, interrupted, 247.
Briddon, Dr. Chas. K., intestinal obstruction, 116.
Bright's disease, 439; significance of casts in, 81.
British lying-in hospital, 322.
British Medical Association, 238, 242, 301.
Bromide mania, 20.
Bromides, Charcot's method of giving them in epilepsy, 28, 140.
Bromism, in a nursing child, 336.
Bronchi, discharge of hepatic abscess into, 572.
Bronchitis, fibrinous, 102; inter-pleural plastic exudation, 370, 417, 444.
Brown, Dr. Bedford, case illustrating vaso-motor disturbances, 89.
Bruen, Dr. E. T., notice of book by, 18.
Brush, Dr. E. F., acute milk-poisoning, 424.
Bryant, Dr. J. D., 717.
Bubo, treatment of, 463.
Buboes, abortive treatment of, 40.
Buchanan, Dr. Andrew, notice of death of, 280.
Buck, Dr. Albert H., a case of foreign body in the external auditory canal, 676.
Bucknill on the mental condition of Guiteau, 298.
Bulkley, Dr. L. D., notice of manual by, 327; notice of book by, 691.
Bull, Dr. William T., on the radical cure of hernia by Heaton's operation, 541.
Burdett, Mr. Henry C., relative mortality of city and cottage hospitals, 387.
Burdock, tincture of, in psoriasis, 585.
Burnett, Dr. J., sponge-grafting, 500.
Burns, alcohol in, 252.
Burrall, Dr. F. A., the exemption of plumbers from zymotic disease, 428, 585.
Butler, Dr. John, notice of book by, 188.
Byrd, Dr. Harvey L., chloroform narcosis, 330.
Byrd, Dr. Wm. A., excision of the intestinal canal when covered with peritoneum, 163.
Byrne, Dr. W. J., strychnia poisoning, 643.

C

Cæcum, epithelioma of the, 162.
Cainca, tincture of, as a diuretic, 662.
Calcium, sulphide of, as an antisuppurative, 41; in small-pox, 140.
Calculi, perineal, 626.
Calculus, cystic oxyd, 133; oxalate of lime, 77; renal, in children, 294; vesical, 555; vesical, distoma hæmatobium a cause of, 687; vesical, impacted, 231; vesical, in a child one month old, 686; vesical in an infant, 294; vesical, of great size, 611; xanthic oxyd, 133.
Calhoun, Dr. Charles William, leprosy, 692.
California State Medical Society, 111.
Calomel, action of, on fermentation, 433.
Cammann, Dr. D. M., bronchitis and inter-pleural plastic exudation, 370, 444.
Cancer of the breast, preceded by a disease of the mammary areola, 13; of the rectum, 713; primary of the bladder, 612; radical cure of, 15; vertebral with paraplegia, 23.

Cannabin tannicum, hypnotic value of, 326.
Capsicum and chinoidine, in intermittent fever, 400.
Carbuncle, local treatment of, 44; treatment of, 135.
Carcinoma, acute miliary, 490; of the breast, 375; uteri, 216.
Carduus marianus, in hæmoptysis, 625.
Caries, dry treatment of, 137; of the spine, 124; of the spine, early diagnosis and treatment of, 152.
Carlsbad salt, artificial, 656.
Caroba, in skin affections, 163.
Carotid compression and physiological brain-rest, 82.
Carpus, exsection of, 612.
Cascara as a laxative, 657.
Casts, significance of, in Bright's disease, 81.
Cataract, extraction of, in the lens capsule, 305.
Catarrh, intestinal, 262; nasal, milk in, 744; vesical, bromide of potassium in, 545.
Causalgia, 106.
Cauterization, punctate, in the treatment of pulmonary diseases, 376.
Cerebral irritation in children, 323.
Cerebral seat of suicidal and homicidal impulses, 622.
Cerebro-spinal fluid, new function for the, 336.
Cerebro-spinal meningitis, parasitic nature of, 323.
Chancre, excision of, as a means of aborting syphilis, 606.
Chandler, Dr. W. J., on nerve-stretching, 253, 282.
Charcot, J. M., notice of book by, 102.
Charity Hospital, ophthalmic division of, 558.
Cheesman, Dr. W. S., hydatid cyst of the liver, 644.
Chemistry in medicine and arts, 175.
Cheyne-Stokes respiration, 333.
Chiari, the pathologist, 392.
Chilblains, nitric acid for, 531.
Childbirth, decrease in deaths from, 266; followed by transitory blindness, 375.
Childhood, eruptive diseases of, 109.
Children, cutaneous diseases of, 603; the growth of, 550.
China, medical impressions of, 52.
Chinese, the, a drug-taking people, 325.
Chinoidine of capsicum in intermittent fever, 400.
Chinolinum tartrate, 712.
Chloral, syrup of bromide of, 136.
Chloroform, alarming narcosis from, 664; deaths from, 28, 128, 139, 165, 391; Dr. Kinloch's case of death from, 157; Narcosis, 330.
Choked disk and intra-cranial disease, 97.
Cholecystotomy, 304.
Cholelithectomy, 258.
Chorea, post-paralytic, 21; propylamine in, 721; rest cure, 351.
Cicatrices, mechanical, 361.
Circumanal glands, 332.
Circumcision, for phimosis with soft chancres, 236.
Cirrhosis, multiple, of the kidneys, liver, and lungs, 295; of liver, 656; of the liver with adenoma, 377.
City of London Hospital, 265.
Clements, Dr. J. W. S., resolutions on the death of, 503.
Climate, improvement of at a slight elevation, 529; of Florida, 356.
Clavicle, fracture of, 611.
Claviculo-scapular region, gunshot wound of, 622.
Code, the new, 362; the new, and Herkimer Co., 700; the new penal, 660.
Cod-liver oil, dugong oil a substitute for, 511.
Colic, lead, 361; nephritic, 140; spasmodic, quinine in, 638.
College-bred men in the medical profession, 681.
Cologne, antiseptic, 391.
Colon, invagination of the, 160.
Color-blindness, following destructive brain lesion, 81.
Colors, poisonous, in food articles, 389.
Colotomy, lumbar, 44.
Coma, malarial, 737.
Comedones, 28.
Comfort and dress, 252.
Compatibility of certain medicines, 684.
Condurango, 587.
Confinement, sudden death after, 230.
Congestion, pulmonary, abstraction of blood from the right heart for the relief of, 705.
Congress of German surgeons, 100.
Conjunctiva, amyloid tumors of, 627.
Conjunctivitis caused by the electric light, 363.
Coniin, action of, 546.
Constipation, in infants, 137.
Consultation, medical, 184; what is a? 164.
Contagious diseases, Norwegian methods of dealing with, 626.
Contraction following hip-joint disease, 95.
Contusions of the abdomen, 687.
Convallaria maialis, 281, 556; action on the heart, 662.
Coover, Dr. Fred. W., humanized vaccine virus v. bovine, 654.
Cord, spinal, alterations of, in phosphorous poisoning, 624; segmental nature of, 235.
Cornea, source of nourishment of, 643.
Corneal condenser, 614.
Cornil, Dr. V., notice of book by, 354.
Cornwell, Dr. Henry G., adenoid encysted tumor of the eyelid, 346; purulent cyclitis from septic embolism of the eye, 180.
Corning, Dr. J. Leonard, congestive headache, 708; sleep, 10.
Corns, remedy for, 447.
Corpuscle, the ovarian, 385.
Corrosive sublimate, in gonorrhœa, 687; in surgery, 108.
Corson, Dr. John W., 168.
Cottage Hospitals, mortality after amputation in, 326.
Cotton-seed, in spasmodic croup, 627.
Cow-pox, spontaneous, 351.
Cox, Dr. Christopher C., notice of death of, 631.
Cremation, 100.
Cretinism, 324.
Cronin, Dr. P. H., voice production, 222.
Cross-legged progression, 8.
Crothers, Dr. T. D., obscure cases of inebriety, 507; vice and disease in inebriety, 723.
Croup, diphtheritic, 632; diphtheritic, tracheotomy for, 512; membranous, 191; spasmodic, cotton-seed in, 627; treatment of, 673.
Curtis, Dr. Holbrood, a simple means of checking pulmonary hemorrhage, 401, 701.
Cutaneous diseases of children, 603.
Cyanosis febrilis cum hæmoglobinuria, 488.
Cyclitis, purulent, from septic embolism, 180.
Cystitis, 523; chronic, 92; chronic, treated with the curette, 489; gonorrhœal, 685; treated by urethrotomy, 329.
Cystoma of the ovary, 189; colloid, of the ovaries and omentum, 610.
Cysts of the broad ligament, 442; of the fibula, 322; of the kidney, 470; of the pancreas, 435, 441; hydatid, cure by capillary puncture, 545.

D

Damages, liabilities for, because of injury to patients during operations, 517.
Dana, Dr. Chas. L., autopsy upon the body of Guiteau, 53; microscopic appearance of Guiteau's brain, 135; the mechanical effect of nerve-stretching upon the spinal cord, 113.
Davis, Geo. S., notice of book by, 691.
Deafness following mumps, 573; ratio of, to population, 359.
Death, sign of, 224; sudden, after confinement, 230.
Deformity of the middle ear, 335.
Deformities of infancy and early childhood, 233.
Delafield, Dr. Francis, notice of book by, 495.
Delegates, instruction of, 659.
Delivery with membranes unruptured, 491.
Dentifrice, 616
Derby, Dr. N. R., quinine in spasmodic colic, 638.
Dermatitis, malignant papillary, 13.

Dermoid tumor of the eyelid, 346.
Diabetes, 700; bromide of potassium in, 360; constant early sign of, 389; iodoform in, 56, 308; pathology of, 304; prognosis of, 624; sudden death and coma in, 713; treated by bromide of potassium, 463; urine of low specific gravity, 729.
Diarrhœa tubularis, 33.
Diastasis of the head of the femur, 570; of the upper epiphysis of the humerus, 471.
Digestion, influence of various agents upon, 737.
Dilatation, acute, of the heart, 632; as a cause of cardiac murmurs, 572.
Diphtheria, 128, 393, 421, 449, 512, 728, 744; of scarlet fever, 579; heroic treatment of, 56; of the skin, 350; pilocarpin in, 335; transportation of by the wind, 41.
Discharges, uterine and vaginal, 309.
Diseases, contagious, 626.
Disease, compulsory notice of infectious, 691; constitutional anomalies in relation to, 688; curing, by anointing with oil, 429; of the Scythians, 22; the sleeping, of Africa, 23.
Disinfection by hot air, 391.
Dislocation, complete, of the radius and ulna outward, 672.
Dislocations of the humerus, 575; voluntary, of a contortionist, 69.
Distoma hæmatobium a cause of vesical calculus, 687.
Diverticulum of the small intestine, 635.
Divorce and insanity, 71.
Doctor, a conscientious, 447; social position of, 129; social relation of the, to his patient, 154.
Doctors' clothes, 380; hotel, 156; natural history of, 355.
Dose, influence of, on the action of remedies, 623.
Draper, Dr. John C., notice of book by, 577.
Drops, comparative size of, 167.
Dropsy, 248.
Drug-taking nation, 325.
Drunkards and dipsomaniacs, voluntary, 237.
Dugong oil, 511.
Duhring, Dr. L. A., notice of work by, 411.
Dyes, aniline, poisonous properties of, 391.
Dysentery, and nitrate of silver, 235; and typhoid fever, 976; chronic, koroniko in, 657; injections of hot water in, 627.
Dysmenorrhœa, viburnum opulus in, 613.
Dyspepsia, forced alimentation and washing in, 560.

E

Eagan, Dr. Peter R., erysipelas as a cause of puerperal peritonitis, 558.
Ear, action of salicylic acid and quinia upon, 489; aspergillus in, 711; deformity of the middle, 335; occlusion of the external, 726; removal of foreign body from, 721.
Ear-ache, atropia for, 391.
Echinococcus in America, 475, 514.
Eczema, 251, 388.
Edson, Dr. Benjamin, gelsemium in rhus-poisoning, 121.
Education, pre-natal, 267; the high-pressure, 436.
Egyptian war, 300.
Elbow-joint, acute suppuration of, 346.
Electric bath, 461, 526; uses and abuses of, 640.
Electrical phenomena, 727.
Electricity, in the treatment of extra-uterine pregnancy, 384; static, 47.
Electro-cautery in eye diseases, 506.
Electrode, a nasal, 331.
Electrolysis in the treatment of urethral stricture, 169, 197.
Electro-physiology, of the human nerves, 302.
Elephant, birth of, 223.
Elephantiasis, 359.
Emigrants, the care of, 185.
Empyema, 514; central pulmonary abscess mistaken for, 55; in a child, 698.
Emphysema, pulmonary, 589.
Encephalon, effects of irritating the, 462.
Endarteritis obliterans, in etiology of myocarditis, 129.
Endocarditis, diabetic, 182; primary, 247; ulcerative, 439.
Engel, Dr. Hugo, localization of intestinal catarrh, 262; the prodromic stages of diffuse kidney affections, 396.
Engelmann, Dr. G. J., notice of book by, 438.
Enteritis, acute, following burns, 582.
Enterotomy, inguinal, 45.
Epilepsy, caused by tumor of the brain, 229; sensory, 122.
Epiphysis, upper, of the fibula, separation of, 77.
Episcopal Hospital, 404.
Epithelia of the kidney, 13.
Epithelioma, interstitial injections in the treatment of, 713; of the cæcum, 162; of the larynx, 719; of the penis, 77, 160.
Epithelium, alveolar, of the lung, diagnostic value of sputum in, 265.
Erdmann, Dr. B. A., notice of book by, 17.
Ergot in obstetrics, 382; in pertussis, 324.
Ergotine in typhoid fever, 686.
Erysipelas, 236, 656; as a cure for insanity, 546; as a cause of puerperal peritonitis, 556; curative action of, 600; faucial, 265; propagated through the digestive tube, 434.
Erysipelas-coccus, 631.
Ether, death under, 168; injections of, producing paralysis, 434; spray of, in neuralgia, 515.
Ethics, medical, the county societies and the New York code, 194.
Eucalyptus globulus in gynecological practice, 513; oil, 381.
Euthanasia, 167.
Evetzky, Dr. E., notice of death of, 700.
Examining board, a national, 390.
Excision, early operative treatment of joint disease as a preventive, 245; of the intestinal canal when covered with peritoneum, 163; periosteal of the wrist, 125.
Excursions, the value of summer, 299.
Exostosis of the femur, 633; of the hand, 130.
Expert testimony, 358, 602.
Exsection, of carpus and metacarpus, 612.
Eye, and the liver, 700; diseases contagious, in schools, 14; diseases of, dependent upon suppression of the menses, 514; diseases of, electro-cautery in, 506; the embryology of the, 432.
Eyelashes, false, 252.
Eye-speculum, 445.

F

Fable, a modern, 251.
Face, as an index of the brain, 302.
Faith, as an essential element of success in practice, 334.
Farquaharson, Dr. Robert, notice of book, 632.
Fat, the assimilation of, 237.
Femur, diastasis of the head of, 570; exostosis of, 633; osteo-sarcoma of, 270.
Fermentation, action of calomel on, 433.
Fever, a theory of, 437; intermittent, arsenic and iodine in, 336; intermittent, flores siliginis in, 56; puerperal, and impure vaccination, 196; prevention of, 722; remittent, pernicious after parturition, 608; scarlet and diphtheria, 579; typhoid, 38; typhoid, and dysentery, 679; typhoid and malarial waves, 671; typhoid and tubercular meningitis, 28; typhoid, antipyretics in, 213; typhoid antiseptic treatment of, 437; typhoid, at seventy-two years of age, 504; typhoid, ergotine in, 686; typhoid, in Paris, 604; typhoid, management of the accidents in, 215; typhoid, new form of, 444; typhoid, sudorific treatment of, 9; typhus, 269; yellow, 240, 276; yellow, and phenic acid, 145; yellow, in 1882, 28, 301, 333, 364, 392, 420, 448, 476, 504, 528, 738.
Fibroma of the renal capsule, 687.

Fibro-myoma, uterine, 655.
Fibula, cyst of, 322; separation of the upper epiphysis of, 77.
Field, Dr. E., foreign bodies in the alimentary canal, 195.
Filix Mas, how to use it, 308.
Finger elongator, 82.
First aid to the injured, 111.
Fistula, biliary, operation for, 112; urethral, 664; vesico-vaginal, caused by position, 587.
Flores siliginis, in intermittent fever, 56.
Florida, the climate of, 356.
Flügge, Dr. C., notice of book by, 17.
Food, antiscorbutic, black ants as, 585.
Foods and flours, prepared composition of, 388; commercial, 360; farinaceous infant, 40.
Fowlwort, a new styptic, 621.
French Association for the Advancement of Science, 416, 443.
Fresh air fund, 588.
Friction-sounds from dilatation of the heart, 530.
Fuller, Dr. William, removal of a portion of intestine, 430.
Funis, shortened, and placental apoplexy, 74.
Furuncle, boracic acid in the treatment of, 573.

G

Galactogogues, 389; cotton-leaf tea as a, 224.
Galactorrhœa, treated by strapping, 435.
Galattofore, as a galactogogue, 389.
Galen, works of, 308.
Gall-stones, 55.
Galvanoplasty, 111.
Gangrene of the intestine, 546; or a boil, 615.
Gastro-elytrotomy, 741.
Gastro-enteritis, alcoholic, 417,
Gastroscopy, 108,
Gastrostomy, 168, 665.
Gelsemium, in rhus-poisoning, 121.
Genital function, nervous disease connected with, 617.
Genu-valgum, 108.
German Surgical Society, 107, 130.
Germicide, carbolic acid as a, 314.
Gill, Dr. H. Z., artificial feeding of infants, 206.
Glands, the circumanal, 332.
Glass-wool, 109.
Glaucoma, acute, cases of, 146.
Glisan, Dr. Rodney, notice of book by, 101.
"Glou-glou pleural," 43.
Glucose, as a diuretic, 215.
Godding, Dr. W. W., notice of book by, 438.
Goitre, 324; etiology of, 443.
Gonococcus, 359.
Gonorrhœa, corrosive sublimate in, 687; frequency of, 503; micro-organisms of, 466; of the rectum, 84; use of condom in, 504.
Gossypium bortadense, as a galactogogue, 224.
Gout, 739.
Grave-robbing, 724.
Gregg, Dr. Rollin G., the recognition of micrococci, 202.
Green, Dr. Traill, the eruptive diseases of childhood, 109.
Griesenger, Dr. W., notice of book by, 717.
Gross, Dr. Samuel D., notice of book by, 579; reception to, 557.
Guachamaca, extract of, for spasms, 532.
Guaiac, in acute tonsillitis, 531.
Guiteau, 15; autopsy upon the body of, 43, 53, 71; brain, microscopical appearance of, 134.
Gynecologist, an ancient, 591.
Gynecologists and virgins, 555.
Gynecology, American, seen through English spectacles, 725.

H

Hæmatinuria, paroxysmal, 699.
Hæmaturia, 337.
Hallux valgus, 120.
Hamilton, Dr. A. McLane, myxodema, 645.
Hammond, Dr. Græme M., on the proper method of executing, by hanging, 426.
Hanging proper method of executing, 426.
Hanks, Dr. H. T., operations for restoring complete lacerations of the female perineum, 1.
Hardaway, Dr. W. A., notice of book by, 605.
Harnden, Dr R. S., multiple sarcoma of the skin, 697.
Hartshorne, Dr. Henry, notice of book by, 101.
Hauser, of Prague, 359.
Hayes, Dr. Justin, uses and abuses of the eletric bath, 640.
Haywood, Dr. R. B., climatic treatment of phthisis, 196.
Hæmoptysis, tincture of carduus marianus in, 625.
Headache, congestive, 708.
Health of criminal women, 577.
Health-resorts, winter, 98.
Heart, action of convallaria upon the, 662; acute dilatation of, 632; effect on, produced by smoking, 183; fatty, 686; hydatid of, 491; malformation of, 76; perforation of the left ventricle of, 407; placental origin of congenital disease of, 655; rapid, 97; rhythm of, 710; spurious murmurs of, 655; stenosis of the left ventricle, 407; valvular lesions of, 161, variations and duration of ventricular systole, 301; blood-letting in diseases of, 462.
Heart-failure, hot applications for, 332.
Heart-murmur, diastolic, without valvular lesion, 351.
Hebbard, Dr. W. W., patent medicines and quack nostrums, 360.
Helenine, action of, on bacilli of tubercle, 503.
Hematemesis, periodical, 37.
Hemato-pericardium, traumatic, 351.
Hemenway, Dr. H. B., influence of dose on the action of remedies, 623.
Hemeralopia, in jaundice, 463.
Hemiplegia, spinal, following gangrene of the great toe, 303.
Hemorrhage, after tonsillotomy, 358; etiology of cerebral, 439; from partially detached placenta in twin labor, 595; from the bowels in typhoid fever, 215; into the pons, 22; pulmonary, the checking of, 502; simple means of checking, 401; vaginal, in a newborn child, 348.
Hemorrhoidal diseases, 225.
Hemorrhoids, prophylaxis of, 178; suppositories for, 712; treated by hot water and dilatation, 329.
Henle, Dr. J., notice of book by, 411.
Henry, Dr. M. H., amputation of redundant scrotum for the cure of varicocele, 509; incarceration of insane, 694.
Hepatic duct, rupture of, 295.
Hepatotomy, 260.
Hermann, Dr. E. N., imperfect nutrition of infants, 320.
Hernia, 106; hepatic, 727; radical cure of, 107; radical cure of, by Heaton's operation, 541, 551, 548; strangulated, 412; strangulated of the vermiform appendix, 600; strangulated, reduction followed by expulsion of a portion of small intestine, 322; strangulated, treated by belladonna, 168; strangulated ventral, 655; traumatic phrenic, 554.
Herniotomy, 107.
Hiccough, persistent, 231, 530.
Hilles, Dr. M. W., notice of book by, 101.
Hinsdale, Dr. Guy, a medical curiosity, 150; Hospital Report, 92, 321.
Hip-joint, disease of, followed by contraction, with treatment by weight and pulley, 95; muscular action in pathology of, 284.
History, natural, and education, 251.
Hogan, Dr. Michael, death of, 724.
Holbrook, M. L., notice of book by, 18.
Holmes, Dr. Oliver Wendell, 671; on physical diagnosis of specialism, 503.
Homœopathic critic criticised, 307.
Homœopathy, progress of, 358.

Horse, fracture of vertebra and malformation of jaw in, 719.
Horse-sense in diagnosis, 280.
Hospital for Diseases of the Throat and Chest, 94.
Hospital of the City of Boston, report, notice of, 187; of the University of Pennsylvania, 92, 321; proposed, for children, 714; Saturday and Sunday Association, 555, 574, 714.
Hospitals, 99; cottage, 217, 358, 379; cottage and city, 387; cottage, mortality after amputations in, 326; temporary, 408.
Hotels, sanitary inspection of, 238.
Hour-glass contraction, ante-partum, 595.
Houston, Dr. Thomas, an obstinate malingerer, 277.
Howard, Dr. H., notice of book, by, 354.
Howell, Dr. S. Y., Langenbeck's last clinic, 272.
Hudson River valley, 410.
Humerus, diastasis of the upper epiphysis, 471; green-stick fracture of, 130; reduction of dislocation of, 515; sarcoma of, 441.
Humphrey, Dr. Lawrence, hospital report, 265.
Hunter, Dr. Alexander S., self-sustaining speculum, 695.
Hunter, Dr. Jas. B., uterine and vaginal discharges, 309.
Hurd, Dr. E. P., cases in practice, 36; on the convallaria maialis, 281, 556.
Hutchins, Dr. O. J., inversion of the uterus, 728.
Hutchinson, Dr. Wm. F., the electric bath, 461.
Hadatid cyst, cure by puncture, 545; of the heart, 491; of the pleura, 687.
Hydroa, of the mouth, 377.
Hydrocele, excessive reaction after injection with glycerine and carbolic acid, 554; on some new methods of treating, 57, 76.
Hydronephrosis, double, 470.
Hydrocephalus following forceps delivery, 391.
Hydrophobia, cure of, 462; injections of the virus of, into the circulation, 227.
Hygiene, imperfect sexual, 55; the National Museum of, 551.
Hyperemesis, a cause of abortion, 392.
Hypnotism, phenomena of, explained, 494; the proportion of persons affected, 727.
Hypodermic use of laxatives, 604; use of silver salts, 28.
Hysterectomy, 383.
Hysteria in the male subject, 457.

I

Idiocy, 324.
Illoway, Dr. H., intestinal obstruction, 734.
Iodoform, 193; in chronic broncho-pulmonary affections, 546; in diabetes, 56, 308; and enlarged tonsils, 152; and Listerism, 138; and phthisis, 70; in treatment of wounds, 132; in tubercular meningitis, 41; in ulcer of the stomach, 27.
Immigrant inspection service, 631.
Incubation, 447.
Index catalogue, 518.
Inebriety, a vice or disease, 668, 723; obscure cases of, 507.
Infant, a bearded, 335.
Infants, artificial feeding of, 206; imperfect nutrition in, 320.
Infectious diseases, acute blood-changes in, 107; notification of, 301.
Injections, hypodermic, of silver salts, 28; rectal, of hot water in dysentery, 627; vaginal, in etiology of peritonitis, 573.
Inoculation in the treatment of pannus, 560, 588; of bovine tuberculous matter in man, 307.
Insane, care of the chronic, 722; incarceration of, 694; medico-legal decision concerning, 699.
Insanity and divorce, 71; and responsibility, 136; caused by brandy and absinthe, 443; cured by erysipelas, 546; domesticity as a cause of, 531; nutrient treatment of, 624; statistics of, 153.
Instinct, seat of, in man, 668.
International Congress of Hygiene, 458.
International hygienic building, 16.
Intestinal canal, foreign bodies in, 91; catarrh, 252; obstruction, 116, 132; perforation, 215.
Intestine, gangrene of, 546; length of, 153; perforation of the, 472; removal of a portion of, 430; resection of, 131; small, diverticulum of, 635.
Intussusception, 407.
Ipecac an oxytocic, 277; in asthma, 56.
Iridin, 55.
Iron in capsules, 140.
Island of Reil, lesion of, 294.

J

Jaborandi, and urticaria, 56; in pleurisy, 625.
Jacobi, Dr. A., county delegates and the New York York code, 417; notice of book by, 718.
Jacobson, Dr. N., foreign body in the air-passages, 733.
Jaundice, hemeralopia in, 463; in pregnancy, 462.
Jenkins, Dr. J. Foster, notice of death of, 504, 615.
Johnson, Dr. Lawrence, notice of book by, 240.
Joints, diseases of, in the puerperal state, 571; resection of, for disease, 444; stiff, treatment of, 246.
Jones, Dr. Herbert C., curious effect of lightning-stroke, 558.
Judson, Dr. A. B., Mr. Shaw's view of the cause of rotation in lateral curvature of the spine, 372.

K

Kelsey, Dr. Charles B., notice of book by, 410; on the treatment of stricture of the rectum, 141.
Kidney, affections of, prodromic stages of diffused, 396; atrophy of, 612; amyloid, 461; amyloid, without albuminuria, 295; cirrhosis of, 295; congenital absence of right, 613; contracted, 349; cysts of the, 470; epithelia of, 13; early recognition of disease of, 628; excision of, 168; frequency of floating, 532; operative fixation of, 131.
Kinloch, Dr. R. A., supposed death from chloroform, 165.
Kinnicutt, Dr. F. P., oil of wintergreen as an efficient salicylate in acute rheumatism, 505, 522.
Knee-joint, a hitherto undescribed lesion of, 50; internal derangement of, 230; rupture of, 245.
Kohn, Dr. Samuel, case of foreign body in the intestinal canal, 91.
Koroniko, in chronic dysentery, 657.
Krog, Dr. Carl, notice of death of, 504.

L

Labor, complicated by pulmonary congestion and œdema, 596; management of, with reference to subsequent uterine disease, 583; sudden death after, 36.
Laceration, of the perineum, 1.
Ladies' doctors, 698.
Langenbeck's last clinic, 272.
Langtry, improbable interview with, 531.
Larynx, anæsthesia of, 560; easy and painless introduction of a tube into, 573; electrization of, 469; epithelioma of, 719; papillomatous tumors of, 611; paralysis of, 452.
Laryngitis, ulcerative syphilitic, 76.
Laudanum, to infants, 258.
Laxatives, subcutaneous use of, 604.
Lead colic, 361; paralysis, 20.
Leal, Dr. John B., notice of death of, 363.
Lefferts, Dr. Geo. M., foreign body in the air-passages, 599.
Leg, gun-shot wound of, 46.
Leidy Memorial, 140.
Leloir, Dr. Henri, notice of book by, 241.

Leonard, Dr. C. Henri, notice of book by, 438.
Leprosy, 78, 336; at Mount Lebanon, Syria, 692; the contagion of, 514.
Leucocythæmia in infants, 84
Leucorrhœa, 382; in children, 328; uterine, 310; vaginal, 309.
Leuf, Dr. A. H. P., notice of book by, 692.
Lewis, Dr. W. Bevan, notice of book by, 438.
Lichen planus affecting mucous membrane, 13.
Life, the chemical cause of, 363.
Ligature, the elastic, for extirpation of tumors of the abdomen, 235.
Ligatures, broad animal for arteries, 103.
Lightning-stroke, curious effect of, 558.
Liniment purgative, 560.
Liniments, facial, 319.
Linsley, Dr. J. H., examination of the urine for albumen and sugar, 208.
Lipoma of the axilla, 634.
Listerism and iodoform, 138.
Litholapaxy, 246, 709.
Lithotomy, long-beaked staff for, 246.
Lithotrity, rapid, 47, 133, 555, 667.
Liver, acute yellow atrophy of, 733; and the eye, 700; amyloid, 473; cirrhosis of, 295, 656, 686; cirrhosis of with adenoma, 377; cirrhosis of, rapidly progressive, 432; cystic tumor of, 344; fatty degeneration of, 737; hydatid cyst of, 644; surgery of, 258, 688.
Liver-pad, 700.
Lloyd, Dr. T. M., cardiac pulmonary and aortic thrombosis, 459.
Localization, cerebral, 439.
Locomotor ataxia, 390; dry cupping and rest in, 373; skin eruptions in, 489; the so-called family form, 19; with well-marked tendon reflex, 448.
London Hospital, 38.
Loring, Dr. E. G., improved means of oblique illumination, 614.
"Love parasite," 532.
Lowell, Dr. A. L., resolutions, 672.
Lunacy, 330; in England, 446; trumped-up, 268.
Lunatics, the commitment of, 604.
Lungs, cauterization in the treatment of diseases of, 376; cirrhosis of, 295.
Lutidine, as an antidote for strychnia, 153.
Lycoperdon as a hemostatic, 712.
Lydston, Dr. G. Frank, opium-poisoning in an infant, 364; prevention of puerperal fever, 722.
Lyman, Dr. H. M., dry cupping and rest in locomotor ataxia, 373.
Lymphadenitis, abortive treatment of, 40.
Lymphatics, superficial, 736.
Lymphoma injections of iodine in, 334.
Lyon, Dr. A. A., broken thermometers, 699.

M

McBride, Dr. T. A., improved Camman's stethoscope, 586.
McCoy, Dr. J. Cresap, on sunstroke, 278.
McIntyre, Dr. Charles, the percentage of college-bred men in the medical profession, 681.
McMahon, Dr. Wm. J., hepatic hernia, 727.
Macalline, 153.
Mackenzie, Dr. Morell, diphtheria, 449; paralysis of the muscles of the larynx, 452.
Macnamara, Mr. C., notice of book by, 606.
Magnetism, the therapeutical employment of, 545
Malaria, causes of, 728; and skin diseases, 697; and sulphur, 531; effects of on man, 236; hereditary and congenital, 687; in children, 662; in Italy, 668.
Malarial parasite, Laveran's 140.
Male fern, supposed death from, 675.
Malingerer, 277.
Malley trial, the, 16.
Mania, malarial, 25.
Manson, Dr. O. F., notice of book by, 718.
Marine Hospital Service, 502.
Martin, Dr. E., notice of book by, 354.
Massage, 447.
Mastitis treated by strapping, 435.
Materia Medica Society, 192.
Mattison, Dr. J. B., opium addiction, 727.
Mauthner Dr. Ludwig, notice of book by, 18.
Meat, juice of, 234.
Meatus, external auditory, 726.
Medical College, a bogus, 138.
Medical Colleges, New York, 616; bogus, in Massachusetts, 724.
Medical curiosity, 150.
Medical education and the American Academy of Medicine, 639; and the medical profession in Europe, 524; progress in, 493.
Medical ethics, New York code of, 447.
Medical examinations, national, 277.
Medical jubilees, 70.
Medical Latin, 566, 637.
Medical legislation, 133.
Medical men and the temperance question, 352; how some are educated, 640.
Medical New York, old and new, 533.
Medical practice on the frontier, 137.
Medical rubbing, 247.
Medical scraps, 276.
Medical school, the Johns Hopkins, 530.
Medical schools, college-bred men in, 575.
Medical Society of the County of New York, 78, 415, 502, 520, 662.
Medical Society, the tri-State, 420.
Medical societies, relations of county and State, 166.
Medical specialties, 158.
Medical students, percentage of college-bred men among, 387.
Medical women, progress of, 616.
Medicine, general, 658; the sunflower in, 126.
Medicines, antipyretic, 234; compatibility of certain, 684; patent, some facts about, 42; proprietary, 644.
Medico-legal Society, N. Y., officers, 700.
Meigs, Dr. John Forsyth, notice of death of, 725.
Meningitis, cerebro-spinal, 220, 612; cerebro-spinal in the new-born, 56, 547; in children, 444; tubercular and typhoid fever, 28; tubercular, iodoform in, 41.
Menses, suppression in etiology of eye diseases, 514.
Menstruation, condition of uterine mucous membrane during, 582; sore throat with, 572.
Mesentery, sarcoma of, 72.
Mesmerizer, shall the travelling, be abolished? 266.
Metritis, exfoliative, 413.
Micrococci, recognition of, 202, 429; test for, 454.
Microscopists, discoveries of, 388.
Midwifery in the Sandwich Islands, 389.
Milk, blue, 279; chemical composition of, from cows fed on distillery refuse, 529.
Milk-poisoning, acute, 424.
Miracles, therapeutic use of, 112.
Missouri State Medical Association, 112.
Möbius, Dr. Paul Julius, notice of book by, 241.
Morbus feminarum, 22.
Morgan, Dr. John G., notice of book by, 241.
Morgue, Paris, 559.
Morphine, danger of large doses in nephritic colic, 140; solubility of officinal salts, 536.
Morris, Dr. Robert T., the local treatment of burns, 653.
Mortality of negroes, 689.
Morton, Dr. A. Stanford, notice of book by, 18.
Morton, Dr. Wm. J., autopsy upon the body of Guiteau, 53; microscopical appearance of Guiteau's brain, 134.
Mosquito, bite of, 744.
Mouth, hydroa of, 377.
Mucous membrane affected by lichen planus, 13; dry treatment of, 136; physiology and pathology of, 352.
Mud-baths, 566.

Mumps, deafness following, 573.
Murmurs, cardiac hemic, 572; chlorotic, 247; spurious cardiac, 655.
Murrell, Dr. W., notice of book by, 606.
Muscarin, 547.
Muscle-reading, 671.
Muscle-sense, 125.
Muscle transplantation, 131, 488.
Myelitis, arsenical, 20; central, 19; produced by Paris green, 499.
Myocarditis, interstitial, 129.
Myograph of nerve-degenerations, 18.
Myopia, and the necessity for its connection with glasses, 415.
Myositis of the floor of the mouth, 490.
Myxo-angioma of the tongue, 719.
Myxœdema, 219, 443, 645.
Myxofibroma of the nares, 270.

N

Naphthalin, treatment of wounds with, 132.
Narcosis, chloroform, 330.
Nares, myxofibroma of, 270.
Naso-pharyngeal tumor, 311, 328.
National Board of Health, 84, 715.
Nausea, hot water in, 625.
Neal, Dr. James C., the climate of Florida, 356.
Neal, Dr. Richard, notice of book by, 355.
Necrosis of the lower jaw, 412; of the spurious processes of the vertebræ, 162.
Needle forceps, 527.
Neilson, Dr. T. B., hospital report, 404.
Nephrectomy, 304.
Nephritis, infectious nature of that accompanying cerebro-spinal meningitis, 323.
Nerve-degeneration, myograph of, 18.
Nerve-fibres, new method of staining, 585.
Nerve-force, rate of transmission, 252, 547.
Nerve-stretching, 26, 253, 282; athetosis relieved by, 21; mechanical effect produced upon the spinal cord by, 113; the median, 727; the optics, 28.
Nervous control, equilibrating value of, 317.
Nervous diseases, functional charges of electrical resistance in, 575.
Neurasthenia, sexual, 617.
Neuralgia, crural, 554; ether spray for, 515.
New-born, a new disease of the, 488.
New Hampshire Medical Society, 50.
Newman, Dr. Robert, treatment of urethral stricture by electrolysis, 169, 197.
New York Academy of Medicine, 24, 47, 439, 495, 583, 606, 740; section in obstetrics, 608; section in practice, 498, 661.
New York Code, 84.
New York Hospital, 212.
New York Neurological Society, 81, 475, 667.
New York Pathological Society, 72, 102, 129, 157, 189, 219, 268, 412, 469, 579, 610, 632, 718.
New York Polyclinic, 476.
New York Society of German Physicians, 440.
New York Surgical Society, 44, 76, 104, 132, 636, 664.
Newton, Dr. Richard C., the "raspberry" vaccination scar, 587.
Nicotine, influence of, upon the gastric secretion, 700.
Nitrogen, elimination of, 302.
Nitrous oxide, 195.
Noma pudendi, 547.
Nomæ vulvæ, 348.
Non-inflammable, to render dresses, etc., 27.
North, Dr. Alfred, cystic tumor of the liver, 344.
North, Dr. N. L., medicinal doses and their relation to therapeutics, 431.
Northeastern Hospital for Children, 346.
Nutrition, imperfect, in infants, 320.
Nystagmus in miners, 417.

O

Obesity and its treatment, 559.
Obstetrics, ergot in, 382.
Obstruction, intestinal, 443, 734; congenital intestinal, 434.
O'Dea, Dr. J. J., diphtheria, 728.
Œdema of the skin, acute circumscribed, 545.
Œsophagoscopy, 108.
Œsophagotomy, 168; internal, 536, 561.
Œsophagus, spasmodic stricture of, 571.
Ohio State Medical Society, 112.
Oil, dugong, a substitute for cod-liver oil, 511; eucalyptus, value of, 381; of wintergreen in acute rheumatism, 505, 522; palm, in phthisis, 447; to keep off mosquitoes, 228.
Oliver, Dr. G., notice of monograph by, 18.
Omentum, sarcoma of, 72.
Omphalitis, complications, 96.
Oöphorectomy in England, 656.
Oöphoro hysterectomy, 741.
Ophthalmia, shepherd's, 686.
Opium and belladonna, 28; and its preparations (new Pharmacopœia), 661; dens, legislation against, 56; habitual use of, 727; poisoning of an infant, 364.
Optic nerve, atrophy of, 305.
Orchitis, gonorrhœal, 233.
Orthopædic neuroses, 498.
Osteogenesis, 245.
Osteoma of the penis, 270.
Osteo-sarcoma of the femur, 270.
Otis, Dr. F. N., acute syphilis, 29.
Ovarian corpuscle, 385.
Ovary, cystoma of, 610; cystoma and papilloma of, 189; sarcoma of, 75.
Ovariotomy, 123, 132, 560; at Bellevue, 654; at fifteen years of age, 249; in a child two years old, 588; in Italy, 376; one hundred consecutive cases, 304; treatment of the pedicle in, 382.
Oxalate of lime calculus, 77.
Oxidizers, atmospheric, 441.

P

Page, Dr. R. C. M., chinoidine and capsicum in intermittent fever, 400.
Paget's disease, 13.
Palmer, Dr. A. B., notice of book by, 468.
Pancreas, cyst of, 435, 441.
Pannus, inoculation in the treatment of, 560.
Papaine, sugared milk of, in the treatment of parasitic tumors, 55.
Papilloma of the ovary, 189; of the uvula, 611.
Paralysis, acute ascending, 302, 355; arsenical, 499; from lead, 20; of the muscles of the larynx, 452; resulting from injection of ether, 434.
Parasite, malarial, Laveran's, 140.
Paresis, progressive, 546.
Parker, Dr. W. Thornton, bro-glyceride, 356.
Partridge, Dr. E. L., unusual cases of labor, 595.
Pasteur, M., 167; vs. Koch, 724.
Pasteur's further experiments in the attenuation of virus, 467.
Patella, compound fracture of, 245.
Patent medicines and quack nostrums, 360.
Pathology, comparative, 447; experimental, in New York, 717.
Patton, Dr. A. A., notice of book by, 102.
Peat, disinfecting and absorbent property of, 130.
Pedicle, treatment of, in ovariotomy, 382.
Pelvis, deformed, 597.
Pemphigus, the becterium of, 601.
Penis, epithelioma of, 77, 160; foreign bodies about, 221; osteoma of, 270.
Peppermint, oil of, in zoster, 625.
Pepsin, digestive power of commercial, 513; nove luse of, 587.

Peptone in the blood or urine, 728.
Percussion, an aid to, 616.
Pericarditis, 161.
Perimeningitis, acute spinal, 407.
Perineum, case of, in the second stage of labor, 382; laceration of, 1; operations for restoring, 24.
Peritonitis caused by vaginal injections, 573; chronic, 720; in a child nine days old, 720; opium treatment of, 662; puerperal, erysipelas as a cause of, 556.
Perityphlitis, 160.
Pessary in the rectum, 532.
Peters, Dr. George A., a substitute for the wrist and ankle band, 670.
Peters, Dr. John C., medical scraps, 276; the history and laws of therapeutics, 151.
Petroleum in phthisis, 140.
Phagedenæ, pyrogallic acid treatment of, 237.
Philadelphia hospitals, 624.
Phillips, Dr. Chas., notice of book by, 240.
Phinney, Dr. A. H., the pathology of tubercle, 668.
Phlebitis of the leg, 231.
Phthisis and iodoform, 70; climatic treatment of, 196; contagion of, 247, 388; ending in recovery or in arrest of the disease, 12; forcible alimentation in, 55, 739; hint for the treatment of, 447; petroleum in, 140; prodromata of, 153; treated with arsenite of soda, 265; vomiting in, hypodermic injection of cold water over the epigastrium, 55.
Physiologists' nightmare, 139.
Physiology of hygiene in the common schools, 602.
Physician, the family, hospital homes for, 714.
Physicians in the world, 700.
Physician's Visiting-list, 1883, notice of, 606.
Physometra, 596.
Pia mater, spinal pigment in, 634.
Pierson, Dr. Wm., notice of death of, 420.
Piffard, Dr. H. G., 307.
Pigment in brain, etc., 633; in spinal pia mater, 634.
Pilocarpin and amenorrhœa, 132; in detachment of the retina, 136; in diphtheria, 335; in polymia, 684, 713.
Piles, 329; carbolic acid treatment of, 136, 332.
Piperidin, action of, 546.
Pirrie, Dr. Wm., notice of death of, 725.
Placenta, unusual relation between it and the membranes, 406.
Plaster-of-Paris bandages, removal of, 334.
Pleurisy, 439; infantile purulent, 294; jaborandi in, 625; with effusion, fatal cases from failure to perform thoracic paracentesis, 40.
Plica polonica, 411.
Plumbers, exemption of, from zymotic diseases, 428, 494, 50d, 585.
Pneumonia, 439; acute, micro-organisms in, 100; alcohol in the treatment of, 601; case with marked central symptoms, 404; infectious, 406.
Poisoning by sewage gas, 587; from red stockings, 616.
Poisons, tolerance of, 600.
Polio-myelitis, 22.
Polypi, nasal, and asthma, 122; naso-pharyngeal, 311, 328; rectal in children, 375; uterine, 76, 157.
Polyuria, pilocarpin in, 684, 713.
Pons varolii, hemorrhage into, 22, 633.
Poore Dr. C. T., cross-legged progression, 8.
Porro's operation, 741; in Italy, 545.
Post, Dr. A. C., hallux valgus, 120.
Post, Dr. Sarah E., cutaneous irritation and the pulse, 365.
Post-graduate studies, 408, 492.
Postero-lateral degeneration of the spinal cord, 23.
Potassium bichromate of, disease produced by, 643; bromide of, in belladonna poisoning, 308; bromide of, in diabetes, 360, 463; bromide of, in vesical catarrh, 545; bromide, undescribed eruption occurring during the use of, 474; chlorate, fatal poisoning from, 12; chloride, not chlorate of, for stomatitis, 360.
Potter, Dr. S. O., notice of book by, 102, 606, 632.
Potts' disease, diagnosis before the stage of deformity, 95; elastic tension and articular motion as therapeutic agents in, 573.
Poultices, 493.
Powell, Dr. Junius L. M., prophylaxis of hemorrhoids, 178.
Practice, success in, 42.
Practitioners' Society of New York, 328.
Pregnancy, extrauterine, 384, 720; jaundice in, 462; vomiting of, 416.
Preserving the bodies of the dead, 559.
Progression, cross-legged, 8.
Pringe, 388.
Proctitis, 711.
Propylamine in chorea, 721.
Pruritus ani, 710.
Psoriasis, tincture of burdock in, 585.
Puerperal joint and bone diseases, 571.
Pulse, how to count a rapid, 194; rapid, 97; the, and cutaneous irritation, 365.
Pupil, phenomenon observed in childhood, 600.
Pus-corpuscles in the blood-vessels in pyæmia, 581.
Pustula maligna, 215.
Pyæmia and salicylate of soda, 131; presence of pus-corpuscles in the blood-vessels in, 581.
Pylorus, a resected, 108.

Q

Quacks in Missouri, 690.
Quinine, 84, 587; action of, upon the ear, 489; artificial, 111; in spasmodic colic, 638; mode of hastening the action of, 600; the home production of, 548; will it produce abortion? 712.
Quinoidine, borate of, 388.

R

Rabies, two cures of, 127.
Race in its relations to surgical operations, 196.
Railroad travelling, effects of, 679.
Randall's Island Hospital, 655.
Ranney, Dr. A. L., notice of book by, 241.
Ranshoff, Dr. Joseph, surgery of the liver, 258.
Rawson, Dr. Edmund G., notice of death of, 528.
Raymond, Dr. H. I., gunshot injury of the clavicular-specular region, 622; primary antiseptic occlusion in military practice, 484.
Rectum, cancer of, 713; feeding per, 64; gonorrhœa of, 84; innervation of, 125; iron bolt removed from, 529; pessary in, 532; rupture of, 626; stricture of, 141.
Rehmann, R., notice of pamphlet by, 411.
Resection of the stomach and intestine, 131.
Resorcin in asthma, 55.
Respiration, cog-wheel, 247; the Cheyne-Stokes, 333.
Retina, pilocarpin in detachment of, 136.
Revulsives, 389.
Reynolds, Dr. James B. resolutions on the death of, 331, 448, 528.
Rheumatism, acute, oil of wintergreen in, 505, 522; frequency of, 530; muscular, 522; subcutaneous ephemeral nodositics of, 215; the salicylates and blisters in, 517.
Rhinophyma, 216.
Rhinoplasty, 131.
Rhus-poisoning, 121.
Ribs, necrosis of, resulting in abscess rupturing into the pleural sac, 189.
Rice, Charles, medical Latin, 637.
Richardson, Dr. John B., a finger elongator, 82.
Rickets among the French, 7.
Ridlon, Dr. John F., plumbers and zymotic diseases, 501.
Robertson, Dr. C. L., translation by, 717.

Robinson, Dr. Beverley, bronchitis and pleural plastic exudation, 417; emphysema, 589.
Roe, Dr. J. O., internal œsophagotomy, 536, 561.
Roosa, Dr. D. B. St. John, medical New York, old and new, 533.
Roosevelt Hospital, 231.
Rosebrugh, Dr. A. M., a new medical battery, 641.
Rothe's method of treating enteric fever, 38.
Rumbold, Dr. Thomas F., notice of book by, 577.
Rutherford, Dr. James, translation by, 717.

S

Salmon, Dr. D. E., on cultivation as a test for micrococci, 454.
Salter, Dr. H. H., notice of book by, 577.
Sanity, symptoms of, 19.
Sarcoma, cystic, of the mesentery and omentum, 72; intracranial, 441; multiple, 268; multiple of the skin, 697; of the brain, 191, 220, 442; of the humerus, 441; of the mediastinum, 488; of ovary, 75; of the skin, 364.
Satterthwaite, Dr. T. E., origin and natural history of tuberculosis, 477, 495.
Scarcity of original workers, 378.
Scarifications in faucial erysipelas, 265.
Schell, Dr. H. S., notice of book by, 102.
Schwatka, Dr. Frederick, scurvy, 340.
Schweig, Dr. Geo. N., the electric bath, 527.
Sciatica, 361, 554; weight and pulley extension for, 694.
Sclerosis, multiple cerebro-spinal, 190.
Scrotum, amputation of redundant, for the cure of varicocele, 509.
Scurvy, 340; in an infant, 713.
Scythians, the disease of the, 22.
Searcy, Dr. J. T., the equilibrating value of nervous control, 317.
Seasickness, hypodermics of morphia in, 737.
Seguin, Dr. E. C., 532, 697.
Seiler, Dr. Geo., foreign bodies about the penis, 221.
Self-hypnotization as a remedy for sleeplessness, 153.
Septicæmia, puerperal, 322.
Sequestra, absorption of, 251.
Sexton, Dr. S., partial severance of the auricle from the head, etc., 721.
Sexual organs, frequency of disease of, among insane women, 657.
Seymour, Dr. W. W., empyema in a child, 698.
Shakespeare, Dr. E. O., notice of book by, 605.
Shears-saw, for removing plaster bandage, 331.
Shoeing, bad, among the poor, 528.
Shoemaker, Dr. M., weight and pulley extension for sciatica, 694.
Shoes, high-heeled, influence of, 385.
Shorter, Dr. J. H., abscess of the brain, 224.
Shrady, Dr. Geo. F., naso-pharyngeal tumor, 311, 328; successful tracheotomy for diphtheritic croup, in child eleven months old, 512.
Sick-headache, 710.
Sieveking, Dr. E. H., notice of book by, 102.
Silver, nitrate of, in dysentery, 235; subcutaneous injection of various salts, 28, 655.
Sims, Dr. J. Marion, 275.
Singultus, and nitrate of amyl, 231; in children, 559.
Skin, action of salicylic acid upon, 711; acute circumscribed œdema of, 545; diphtheria of, 350; eruptions in locomotor ataxia, 489; multiple sarcoma of, 364.
Skin-grafting from rabbits, 11.
Skull, gunshot wound of, 131; of Kant, 137.
Slaughter-houses, 437.
Sleep, 10.
Sleeping disease, the, of Africa, 23.
Sleeplessness, self-hypnotization as a remedy for, 153.
Small-pox, calcium sulphide in, 140; carbolic acid to abort the eruption, 125; hemorrhagic, 443, 736; in birds, 9; new treatment, 360.
Smith, Dr. A. P., hysteria in the male subject, 457.
Smith, Dr. J. Lewis, notice of book by, 101.
Smoking, habitual, 731; juvenile, 218.
Snake-bite, 208, 234; cure by phenic acid, 375.
Soda, arsenite of, in phthisis, 265.
Sodium, sulphocresylate of, 216.
Soft-soap, therapeutic use of, 711.
Spasms, new remedy for, 532.
Speculum, self-retaining semi-proned, 695; tracheal, 572
Spence, Prof. James, death of, 55.
Spencer, Mr. Herbert, in America, 574.
Spinal accessory nerve, unsuccessful attempts to stretch, 46.
Spinal cord, compression of, by the odentoid process, 22; mechanical effect of nerve-stretching upon, 113; postero-lateral degeneration of, 23; stretching the, 22.
Spine, caries of, 124; caries of, early diagnosis and treatment of, 152; fracture of, in the dog, 158; lateral curvature of, 372.
Sphygmograph, modification of Pond's, 20.
Spleen, extirpation of, 131, 737.
Spondylitis, cervical, 442.
Sponge-grafting, 122, 402, 500.
Spoon, the sharp, in surgery, 298.
"St. Jacob's Oil," 308.
St. Mary's Hospital, London, 231.
Stair, Dr. J. B., acute ascending paralysis, 355; inebriety a vice or disease, 668.
State Board of Health, 409.
State Boards of Health, 359.
Stein, Dr. Alex W., Hæmateria, 337
Stenosis, aortic and mitral, 161; of the left cardiac ventricle, 407; relative to the cardiac orifices, 350; tracheal, 523.
Sterility in the male, 182.
Sternberg, Dr. Geo. M., carbolic acid as a germicide, 314; injections of the virus of hydrophobia into the circulation, 227; the recognition of micrococci, 429.
Stethoscope, Camman's improved, 101, 586.
Stature, daily variations in, 625.
Static electro-therapeutics, 23.
Starch, iodide of, as an antidote for poisons, 28.
Stockings, poisoning from red, 616.
Stomach, absorbability of the, 446; normal position of, 737; resection of, 131; resection of first in America, 465; rupture of, caused by lobelia, 446; temperature of, 446.
Stomatitis, chloride of potassium for, 360.
Stone in the bladder in a child one month old, 686.
Stricture of the rectum, 141; spasmodic, of the œsophagus, 571; urethral, electrolysis in the treatment of, 169, 197.
Strictures, tight, of the urethra, 419.
Strychnia and alcoholism, 434; cutidine as an antidote for, 153.
Strychnine-poisoning, 643.
Studley, Dr. W. H., obituary, 26; resolutions, 27.
Styes, to abort, 390.
Styptic, fowlwort as a, 621.
Sugar, examination of urine for, 209; in dropsical fluids, 490.
Suicide, curious mode of, 327.
Sulphur, and malaria, 531; in the urine, 476.
Sunflower, the, in medicine, 126, 529.
Sunstroke, 278.
Surgeon-General, the annual report of the, 516.
Surgery, and the doctrine of evolution, 405; corrosive sublimate in, 108; international encyclopædia of, 410; of the liver, 688.
Sutures, frontal, persistent, 611.
Sutures, silkworm-gut, in gynecological surgery, 121.
Sweating, excessive, 285.
Synovites, tuberculous, of tendinous sheaths, 123.
Syphilis, abortion of, by excision of chancre, 606; acute, 29; and becteria, 380; bacillus of, 392; Egyptian treatment of, 560; effect of the rheumatic diathesis on the initial lesion of, 182; tayuya in, 55; treated with ammonii mercuric peptone, 363.

T

Tænia medico-cancellata, or beef tapeworm, 269 ; solium, 718.
Tabes dorsalis, 390 ; in early childhood, 573.
Tait's operation, 740.
Tansy, oil of, death from, 697.
Tapeworm, the beef, 269.
Taylor, Dr. Henry Ling, a comparison of the bodily temperature in different situations, 568 ; epidemic of acute dysentery in patients convalescing from typhoid fever, 679 ; hospital report, 231.
Tayuya in syphilis, 55.
Teetotalism a scientific impossibility, 279.
Temperature abnormally low from cold, 212 ; comparison of the bodily, in different situations, 568.
Tendon-reflex absent in a case of ataxia, 448.
Testicle, perilymphatic sheath in the, 545.
Testimony, expert, 602.
Tetanus, 710; complicating typhoid fever, 686 ; traumatic, 96.
Thayer, Dr. Samuel White, notice of death of, 615.
Therapeutical notes, 55, 388, 389.
Therapeutics, history and laws of, 151 ; mechanical, of versions and flexions of the uterus, 386 ; relation of medicinal doses to, 431.
Thermometers, broken, 699 ; the Yale bureau of examination, 167.
Thomas, Dr. J. G., 27; trismus nascentium and adherent prepuce, 639.
Thought-reading and brain waves, 218.
Thomas' operation, 741.
Thompson, Sir Henry, notice of book by, 241.
Throat, scalded, 347 ; sore, at each menstruation, 572 ; syphilitic diseases of, 94.
Thrombosis, cardiac pulmonary and aortic, 459 ; antemortem in the right ventricle, 103 ; of the pulmonary artery, 102 ; of the uterine veins, 189.
Thymol-gauze, 130.
Tibia and fibula, fracture of, 730.
Tilt, Dr. Edward J., notice of book by, 101, 605.
Tobacco, effects of habitual smoking of, 731.
Tonga, remedial virtues of, 91.
Tongue, myxo-angioma of, 719.
Toothache, 334.
Torticollis, chronic, 46.
Tonsillitis, 388 ; acute, guaiac in, 531.
Tonsillotomy, hemorrhage after, 358.
Tonsils, enlarged, and iodoform, 152.
Toy pistol, 299.
Trachea, permanent tampon, 713; rupture of, from cough, 599.
Tracheotomy for diphtheritic croup, in child eleven months old, 512.
Trachoma, 228.
Trance lethargy, case of, 306.
Transactions of the American Gynecological Society, 187 ; of the Illinois State Medical Society, 17 ; of the Medical Society of the State of Pennsylvania, notice of, 327.
Transfusion of blood, 417.
Trichiasis, 305.
Trichniæ, 692, 712 ; will salting kill them ? 359.
Trismus nascentium, 221 ; and adherent prepuce, 639.
Troeltsch, Dr. Anton von, notice of book by, 354.
Tropho-neurosis of the hand, 440.
Tubercle, the bacillus of, 390, 392, 519 ; bacilli of, poison for, 508 ; recent literature of, 296 ; the pathology of, 668.
Tuberculosis, 99 ; origin and natural history of, 477, 495 ; of the heart in children, 627 ; pulmonary, of traumatic origin, 376 ; pulmonary, the value of abnormal respirations as a sign of incipient, 183.
Tuberculous matter, bovine, inoculation of, in man, 307.
Tumors, amyloid, of the conjunctiva, 627 ; cystic, of the liver, 344; dental, of the lower jaw, 28; dermoid, of the eyelid, 344; malignant, treatment by electrolysis of iodide of potassium, 407; naso-pharyngeal, 311, 328 ; of the brain, 20; of the fourth ventricle, 491 ; of the fourth ventricle of the brain without symptoms, 24.
Turner, Dr. D. W., notice of book by, 241.
Turnipseed, Dr. E. B., are the following medicines compatible ? 684.
Twins, complications at labor, 595.
Tyler, Dr. Lachlan, retro-pharyngeal abscess, 273.
Tyson, Dr. James, percentage of college-bred men among medical students, 387.

U

Ulcer, duodenal, 252 ; gastric, pathogenesis of, 571 ; of the stomach, iodoform in, 27 ; of the stomach in etiology of perforation of the left ventricle, 407 ; rodent, 305.
Ulcus elevation, 474.
Ultra-quinine, 28.
Undertakers' Association, the New York State, 139.
Uræmia, convulsions from, 655.
Ureters, occlusion of both, simultaneously, 12.
Urethra, female, new method of exploration of, 383 ; tight strictures of, 419.
Urethritis in females, 657.
Urethrotomy, cystitis treated by, 329.
Urine, albumen and sugar in, 208 ; chylous, etiology of, 213 ; diabetic, of low specific gravity, 729; extravasation of, 231 ; in fatty liver, 737 ; intestinal origin of certain alkaloids found in the, 600 ; new tests for albumen in, 559 ; significance of peptone in, 728 ; sulphur in, 476 ; vomiting of, 279.
Urticaria and jaborandi, 56.
Uterine displacement, 560.
Uterus, carcinomatous pedunculated tumor attached to the inner wall, 473 ; discharges from, 309 ; disease of, among insane women, 657 ; extirpation of, 644 ; fibro-myoma of, 469 ; fœtal bones in, 657 ; fundamental nervous plexus of, 657 ; inversion of, 728 ; mechanical therapeutics of versions and flexions of, 386 ; multiple fibroma of, 620 ; sarcoma of, 470 ; subinvolution of, 248 ; tumors of, ergot treatment, 216.
Uvula, papilloma of, 611.

V

Vaccination, 58, 218, 587 ; bovine, 138 ; impure, and puerperal fever, 196 ; in Illinois, 466 ; intra-uterine, 737 ; obligatory in Switzerland, 308 ; of immigrants, 550.
Vagina, discharges from, 309.
Valk, Dr. Francis, trachoma, 228.
Valve, aortic bicuspid, 104.
Varicocele, amputation of redundant scrotum for, 509.
Varioloid, doubtful case of, 443.
Vaso-motor disturbances, 89.
Veeder, Dr. M. A., what is a consultation ? 164.
Venis, hepatic, obliteration of, in cirrhosis, 686.
Venereal wards of Vienna Hospital, 392.
Venesection, 234.
Ventricle, cardiac, stenosis of the left, 407 ; cardiac, perforation of the left, 407.
Vermiform appendix, hernia of, 600.
Vermont State Medical Society, 112.
Vertebræ, necrosis of the spinous processes, 162.
Vertigo, aural, 183.
Viburnum opulus in dysmenorrhœa, 613 ; prunifolium, 587.
Viola tricolor, 192.
Virgil a veterinary poet, 560.
Virus, bovine, preservation of, 353 ; humanized, 137 ; humanized *vs.* bovine, 654.
Voice, production of, 222.
Vomiting, hot water in, 625 ; hypodermics of cold water for, 55 ; periodical, 490.
Von Ramdohr, Dr. C. A., combined needle-forceps, 527.
Vulvitis, external follicular, 122.

W

Wadsworth, Dr. J. W., ipecacuanha as an oxytocic, 277.
Wales, Dr. P. S., nerve-stretching, 26.
Wallace, Dr. David L., remedial virtues of tonga, 91.
Ward, Dr. Geo. A., malarial mania, 25.
Ware, Dr. Charles, improved Cammann's stethoscope, 501.
Water, cold, hypodermics of, for vomiting in phthisis, 55; hot, injection of, in dysentery, 627; hot, in nausea and vomiting, 625; hot, in piles, 330.
Water, of the Dead Sea, 252; oxidized, 252; oxygenated, as a dressing for wounds, 601.
Water-cures, German, 186.
Waterman, Dr. S., diabetes in the urine of low specific gravity, 729.
Watson, Dr. W. P., plaster bandage shears-saw, 331.
Watson, Sir Thomas, 588, 715, 723.
Weber, Dr. Leonard, locomotor ataxia complicated by acute cardiac disease, 651, 661. .
Webster, Dr. David, cases of acute glaucoma, 146.
Weir, Dr. R. F., on some new methods of treating hydrocele, 57, 76.
Well-water, 239.
Welsh, Dr. Geo. T., piles treated with dilatation and hot water, 330.
Westerbrook, Dr. B. F., on abstraction of blood from the right heart, 705.
White, Dr. J. P. P., obituary, 670.
Whitman, Dr. Royal, hospital report, 402.
Whooping-cough, 391; at eighty years of age, 642; ergot in, 324; phenic acid in, 168.
Wilder, Dr. A. M., medical legislation, 133.
Wilson, Dr. Holt C., a case of litholapaxy, 709.
Wilson, Dr. Milo A., notice of death of, 168.
Wingate, Dr. U. O. B., sudden death after confinement, 230.
Woman doctor in fiction, 672.
Women, American, health of, 629; insane, frequency of disease of sexual organs among, 657.
Wood, Dr. H. C., Jr., notice of book by, 578.
Wood, Dr. James R., 135.
Woorara, value of, in medicine, 25.
Workers, scarcity of original, 370.
Wound, gunshot, of the claviculo-scapular region, 623; gunshot, of the forearm, 190; gunshot, of the leg, 46; gunshot, of the skull, 131.
Wounded, treatment of, in Egypt, 559.
Wounds, iodoform in, 132; oxygenated water as a dressing for, 601; sanitary conditions in relation to the treatment of, 124; treatment of, with naphthalin, 132.
Wrist, painful affection of, 235; periosteal excision of, 125.

Y

Yale, Dr. L. M., cases treated with phenic acid, 85, 104.
Yerba, Santa, 193.

Z

Zinc, therapeutic action of, 625.
Zoster, bilateral general, 350; oil of peppermint in, 625.
Zymotic theory of disease, 529.